The Far Eastern Review

ENGINEERING + FINANCE + COMMERCE

A Monthly Review of Far Eastern Trade, Finance and Engineering, Dedicated to the Industrial Development and Advancement of Trade in Far Eastern Countries.

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THE PHILIPPINES

Historical.

Early Philippine history fades away into the history of Chinese foreign adventure and commerce, trading having been carried on between the two countries for a thousand years prior to the Spanish conquest.

Magallanes discovered the Philippines in 1521, about 100 years before the Pilgrim Fathers landed at Plymouth Rock. Spaniards settled Cebu, 1568. Legaspi occupied Manila, 1570. British captured Manila, 1762.

United States occupied Manila August 13, 1898. Treaty of Paris signed December 10, 1898. Filipino insurrection began February 4, 1899. First provincial government organized (Pampanga), February 6, 1901. First American Civil Governor, William H. Taft, July 1, 1901. Philippine Act passed July 1, 1902. Jones Act passed August 29, 1916.

Geography.

The Philippine Archipelago extends from the Batanes Islands in the north to the Tawitawi group at the southern end of the Sulu islands, a distance of 1,152 miles. The archipelago is composed of 3,141 islands, of which 400 are inhabited.

Area of Archipelago.

	Square miles.
Total area, land and water	832,968
Land	127,825
Water	705,115

Comparative Areas.

	Square miles.
Philippines	127,853
British Isles	120,973
New York, New Jersey, Pennsylvania, and Delaware	104,970
Japan	147,649

Luzon islands is as large as Denmark, Belgium, and Holland combined. Mindanao is about equal in area to Portugal.

Distribution of Area.

	Square miles.
Forest land	72,000
Commercial forest	61,000
Cultivated	14,000
Grass lands	20,000
Unexplored	14,000

Forest lands contain some 747 native tree species; 50 to the acre in some parts. Mindanao has 423 varieties. Over 200 varieties come to the Manila market. One-half of the forest land is virgin.

Cultivated Land

	Acres.
Rice	3,000,000
Hemp	1,236,000
Coconuts	680,000
Corn	1,070,000
Tobacco	145,000
Sugar	445,000
Maguey	76,000
Cacao	2,600
Coffee	2,000

Comparative Cultivation.

Japan and the Philippines: Japan with 14,000,000 acres of arable land produces crops to the value of Ps.2,000,000,000. Philippines with 7,000,000 acres produces only Ps. 200,000,000.

Population.

Total from latest (1917-18) Philippine Health Service records: 9,500,000.

Christians	8,730,000
Mohammedans	275,000
Non-Christians and Pagans	595,000
Japanese	42,800,000

Progress of Population.

1735	837,182
1805	1,741,234
1826	2,593,287
1840	3,096,031
1862	4,734,533
1887	5,984,727
1896	6,261,339
1917-18	9,500,000

Climate.

Average temperature for 30 years: 80° Fahrenheit.

Dry temperate months: November, December, January, and February.

Intermediate months: March, July, August, September, October.

Hot months: May and June.

Rainfall.

Maximum days of rain in July, August, September.

Minimum days of rain in February and March.

Dry season: November to May, inclusive.

Wet season: June to October, inclusive.

Typhoons: Frequent in July, August, September, and October.

Mountains.

	Feet.
Apo	10,312
Pulog	9,450
Mayon	8,970
Halcon	8,865
Malindang	8,197
Canlaon	8,192
Ste. Tomas	7,418
Data	7,364
Banajao	7,382
Pagsan	7,339
Isarog	6,450
Pinalobo	6,137
Cristobal	5,288
Bulusan	5,100
Maquiling	4,783
Arayat	3,564
Talim	1,519
Taal	1,050

There are 50 volcanoes in the archipelago, of which 20 are active and 30 are extinct.

The principal active volcanoes are Taal, Canloan, and Apo.

The principal extinct volcanoes are Talim, Maquiling, Cristobal, Banajao, and Isarog.

Rivers.

	Miles
Grande de Pampanga	220
Pulangi, Mindanao	300

Other rivers of importance are the Agno Grande, Grande de Pampanga, Agusan, and Pasig.

Mindoro has 60 rivers and Samar 26, none of them of commercial value.

Real Estate Values.

[1 peso=$0.50].

Manila	Ps.104,024,000
Provinces	392,180,000

Mortality (Americans and Europeans) per 1,000 (1917-18).

Manila	8.0
New York	16.5
San Francisco	15.0
Chicago	14.0
Glasgow	18.0
Belfast	22.0

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THE EASTERN REVIEW

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Mr. Lamont and the Consortium

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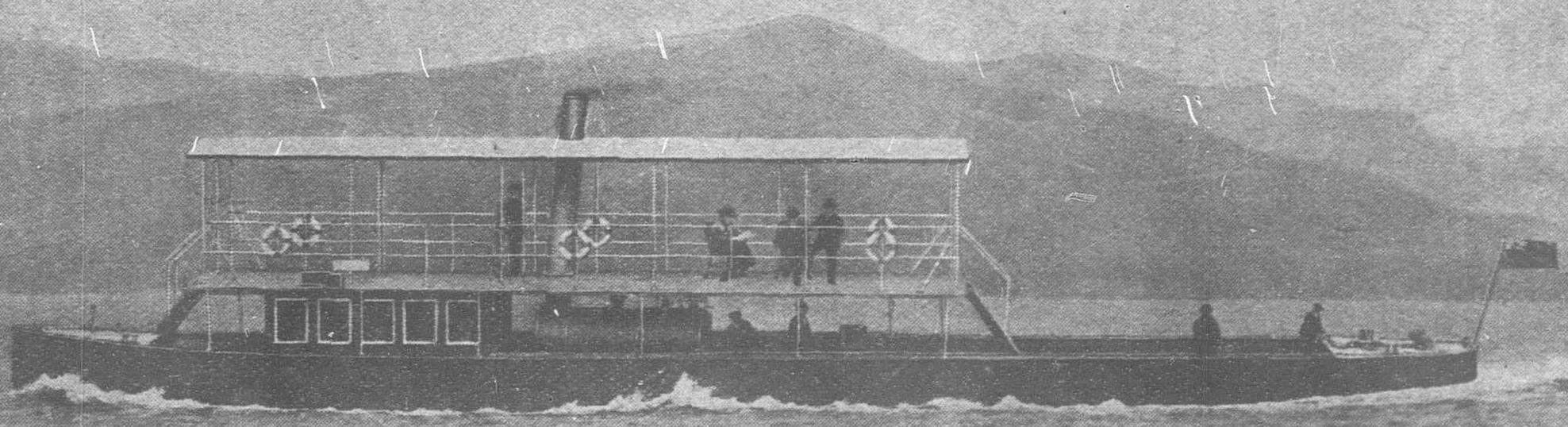

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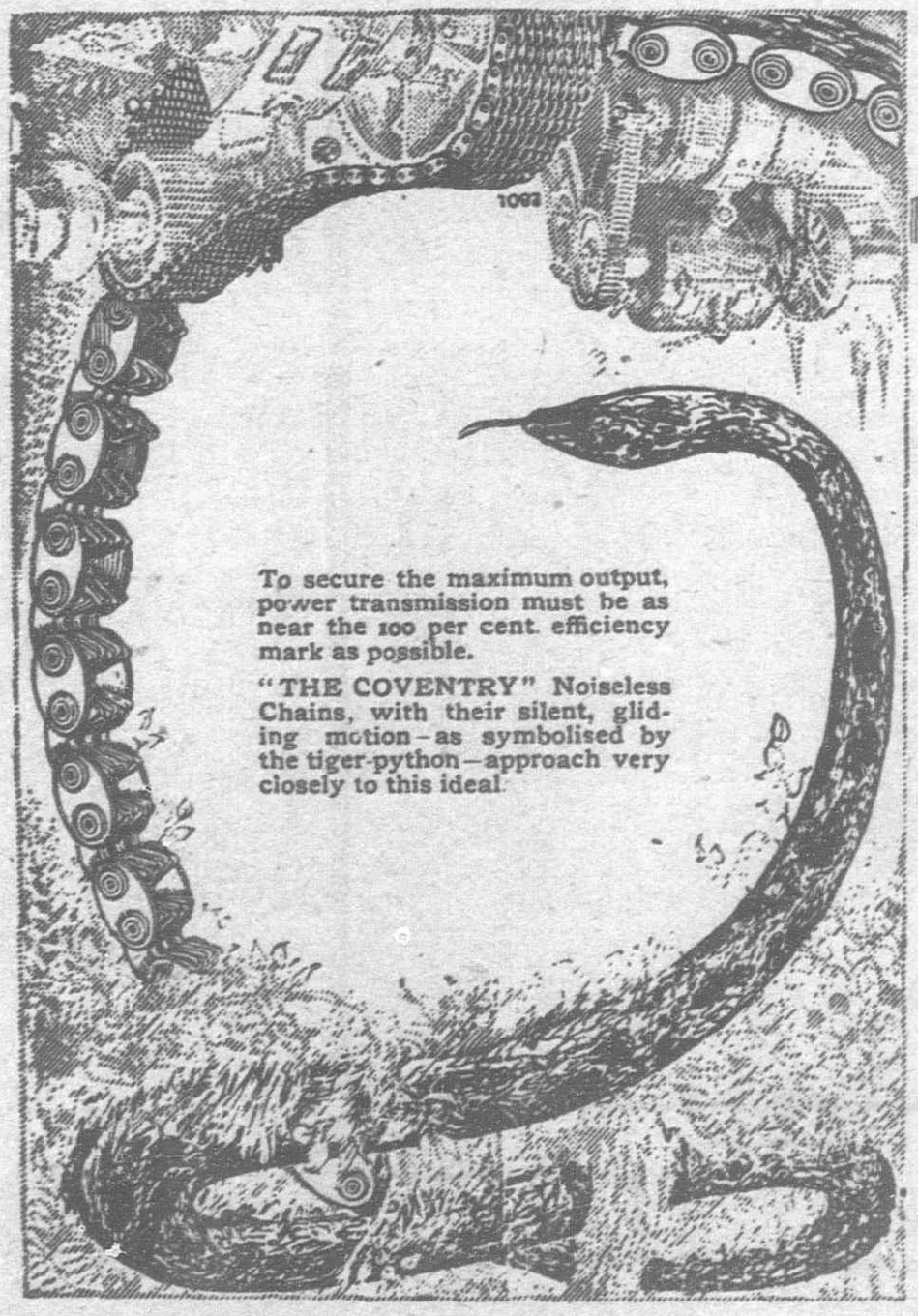

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The Far Eastern Review

ENGINEERING FINANCE COMMERCE

VOL. XVI SHANGHAI, MAY, 1920 No. 5

Great Plans for Education in China

YALE-IN-CHINA—An Educational Idea on a Large Scale

By Amos P. Wilder

(Former U. S. Consul-General at Shanghai)

THE old fashioned college was a matter of recitations, and only incidentally did its good things spill over for the benefit of outsiders; but the modern university is a storm centre of activities and a dynamo of influences. It is a collection of experts in many lines and it is obviously absurd to limit its usefulness. Thus when the driving power of Yale University is put behind an extension of "Veritas et Lux" into China, it is a legitimate function of a modern university. This article has to do with one of the half dozen leading colleges in China, where Yale graduates teach and Yale doctors heal; the whole supported by Yale and her friends.

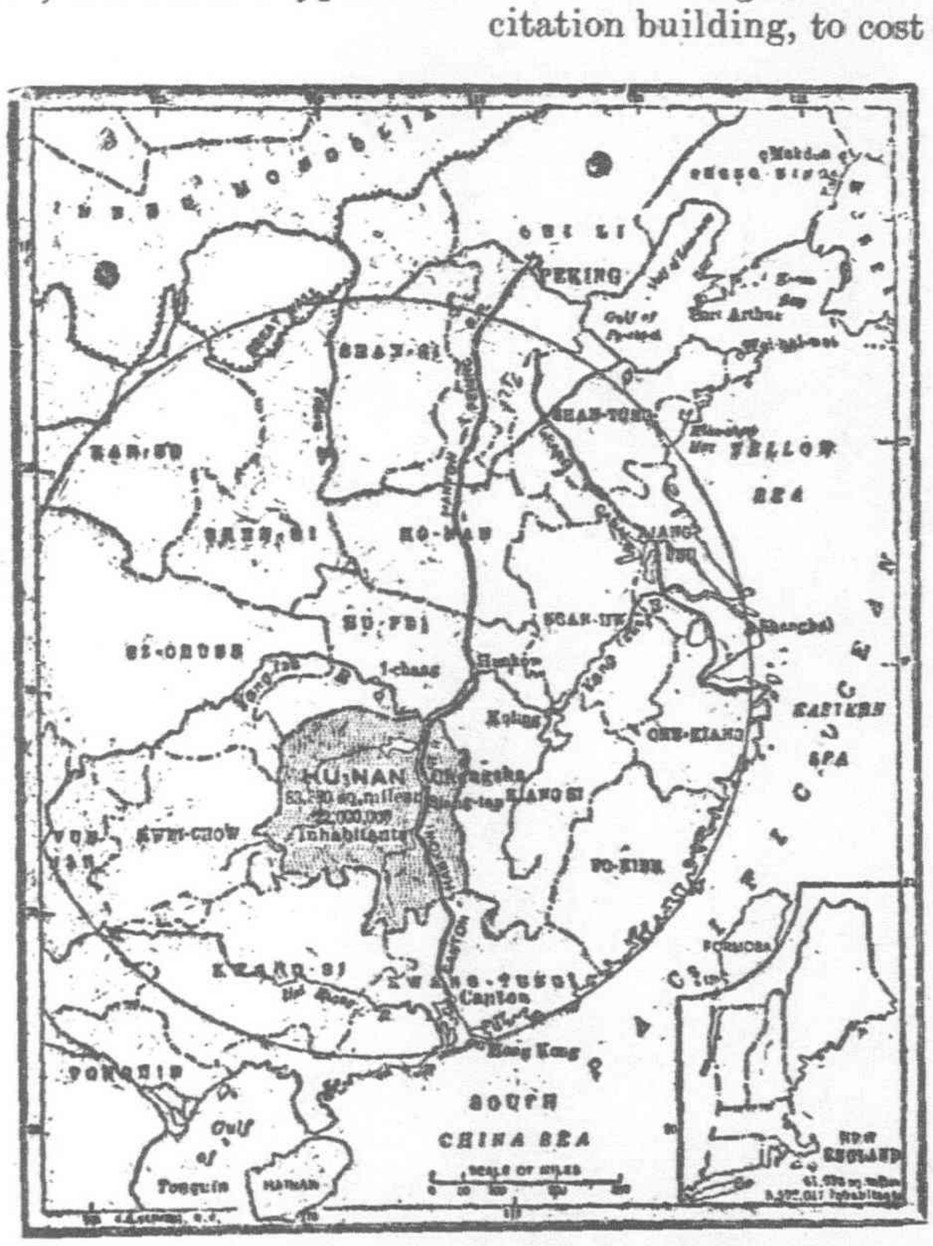
A group of Yale graduates at the time of the Princeton games were chatting in the Graduates' Club at New Haven when a Buffalo man of national reputation said, "Of all these outside things the college is doing, this 'Yale-in-China' proposition mosts grips me. The more I read of it, the more important it seems. The fact is, Yale is starting a centre across the Pacific that is to play a very large part in future trade and international politics, as well as in philanthropy."

Begins in 1906

The work to which he referred is "the College of Yale-in-China," now a considerable plant occupying forty acres outside the north gate of Changsha. Instruction began in 1906 in rented quarters within the crowded city walls. The little group of Yale men and women was neglected and distrusted at first by the Chinese of the proud provincial capital. For many years the teachers did their work under insanitary and inconvenient conditions. But in 1912 the home authorities started a vigorous campaign to house Yale-in-China in a new group of buildings, scientifically planned and well-built; and engaged the New York firm of Murphy and Dana to design such a group, in an adaptation of the beautiful native architecture. Construction started in 1914; and now the splendid new campus, in the open country outside the City Walls, is more than half completed (the light-toned buildings in the accompanying bird's-eye perspective are already finished).

The hospital, a gift of a member of the class of '97, is, next to the splendid institution just opened at Peking by the China Medical Board of the Rockefeller Foundation, the best in China; and is the most imposing building in a province of 22,000,000 people. This cost $200,000. A dormitory houses 120 students; and there is urgent need for a second dormitory, as at present applicants are being refused. There is the Atterbury Memorial Chapel; a laboratory for the study of physics, biology and chemistry; a temporary recitation hall, and a number of residences for the faculty.

The Chinese themselves are now erecting a building for medical uses. A library is proposed as a memorial to Warren Seabury, for this his father has collected $10,000, and when the balance is forthcoming the building will be erected. The handsome recitation building, to cost $75,000, should be built as soon as possible.



Hunan Province in whose Capital, Changsha, is located Yale-in-China

It is also desirable to secure more land before prices become prohibitive. The new North and South Railway now building between Hankow, the great central city of the country ("The Chicago of China") and Canton, the metropolis of the south, skirts the Yale campus. There is a land boom on in that part of the city as the high-class Chinese wish to live in a district so handsome and well cared for as the college campus. The example of other colleges, forced to buy land at fancy prices in the later years, shows the desirability of "shopping early" in the matter of land purchases. As a matter of fact land values in China are not especially cheap. Their measure is the "*fong*" equal to 100 square feet. There are thus 400 *fong* to the acre. Choice land may be quoted at $15 to $18 per *fong*, or over $7,000 an acre—and this "outside the walls" or, as we would say, "away from the centre of the city."

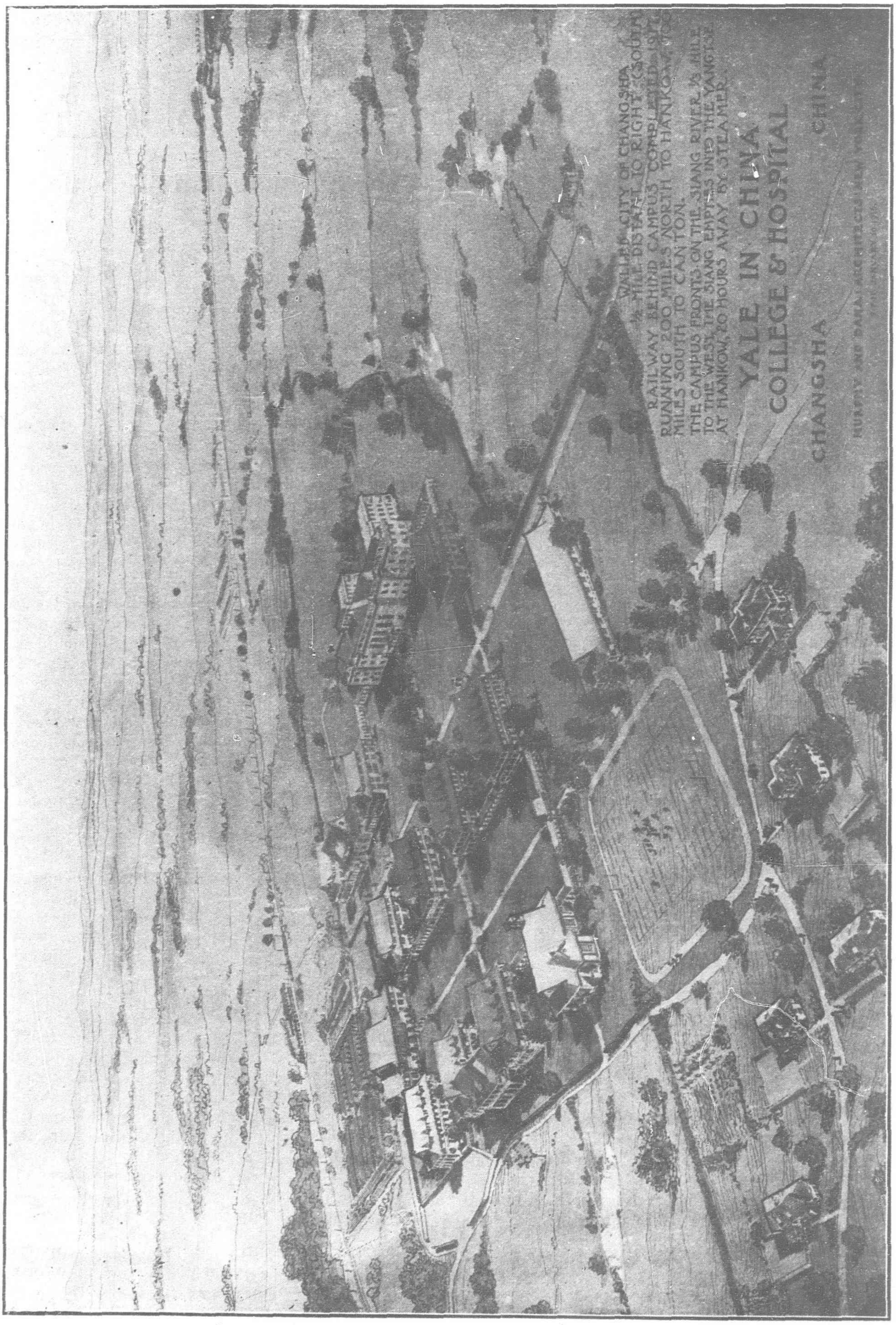
The officers of the society in New Haven who manage the Yale-in-China plant—engaging and sending out teachers, doctors and nurses—have long appreciated what is being done; but only recently has this appreciation begun coming to the body of graduates. "Yall" (which is the Chinese term for the college, meaning "The College of Elegant Proprieties") was mooted in 1902 and the society incorporated under the laws of Connecticut the following year.

In the winter of 1919 the Connecticut legislature empowered "Yall" to confer degrees. The work was a missionary venture in the beginning; indeed, the official name is still "The Yale Foreign Missionary Society." Timothy Dwight was the first president, and Dean Wright was the second. The earnest type of professor and graduate made up the directory and the two or three young men sent out to learn the Chinese language, select

a location and make a start were either ministers or active religious workers. Such auspices are favorable for a work that is to be vital and enduring; indeed, they are essential.

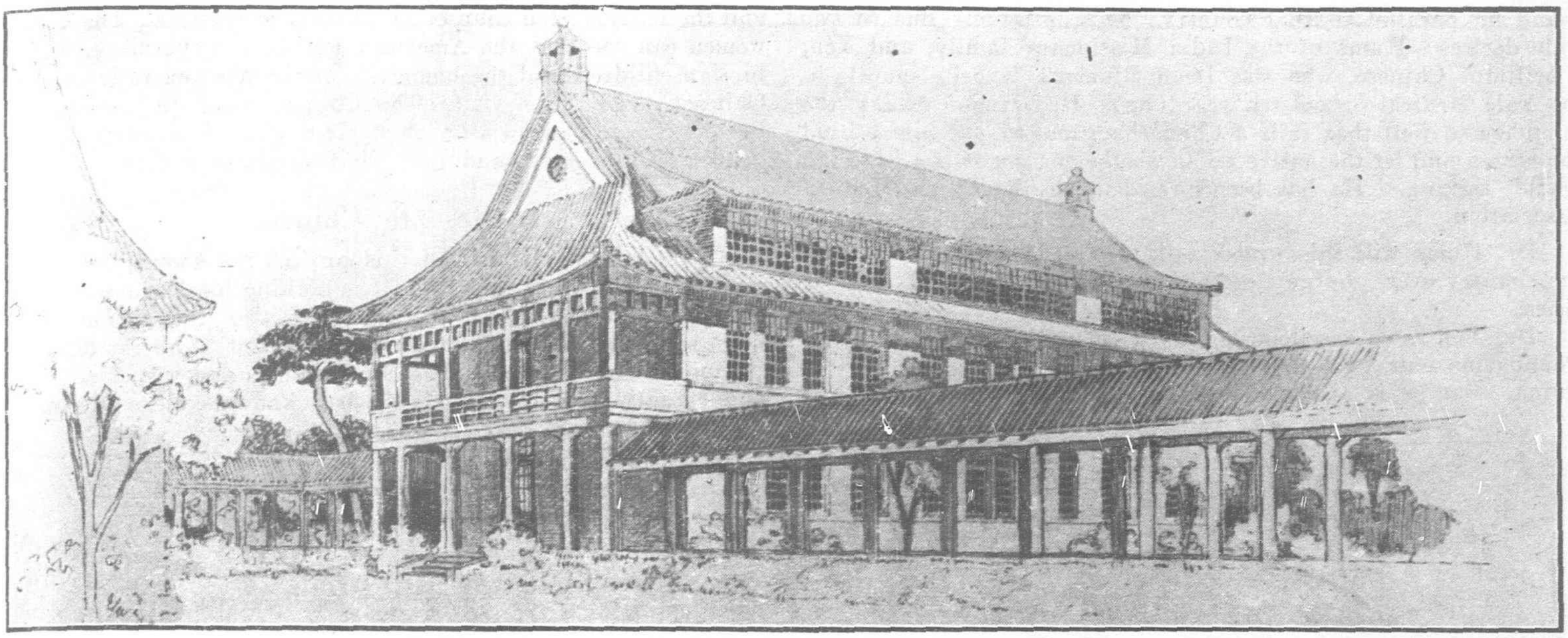
Thus the China Yale was started. Eighteen years ago young men of ability were not going to betake themselves to interior China for a life's work unless they had a driving power within —nor indeed will they now. It surely is not for profit that doctors and teachers go out. They are paid enough to live on and their lives are insured, but no more.

Dr. Welch of Johns Hopkins, who toured China for the Rockefeller Foundation in 1914, was much impressed by the close relations of the Chinese with Yale's people. In fact he said he



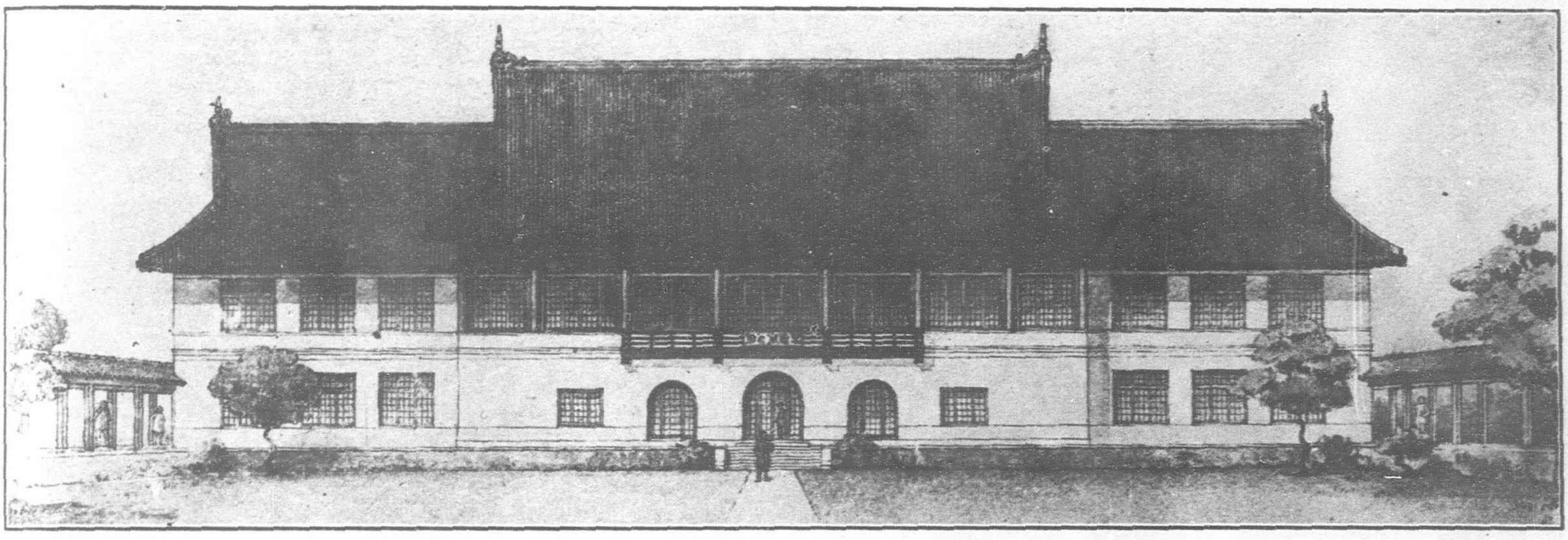
Yale-in-China, Changsha, Hunan. Academic and Medical Groups

Note.—The six buildings shown in the lighter tone have been completed; also four of the residences in the foreground

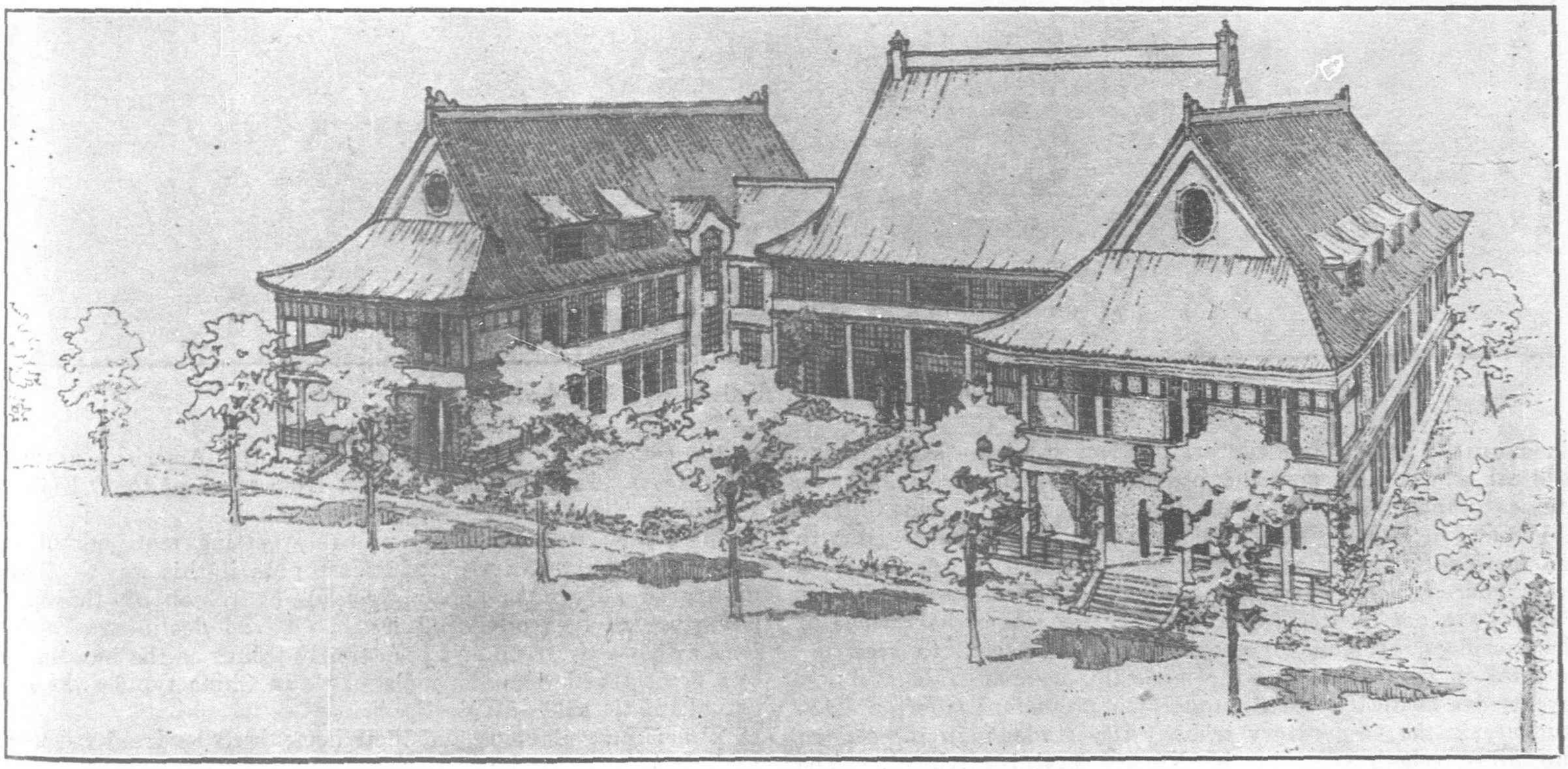


Laboratory Building, Yale-in-China, Changsha

Note.—**The funds for building this Laboratory were contributed by the China Medical Board of the Rockefeller Foundation**



Campus Elevation of Library, Yale-in-China, Changsha



Recitation Building, Yale-in-China Changsha

found no parallel in that country. Th is largely due to two Yale doctors: Hume of the India Missionary family, and Yen, a brilliant Chinese, who was Dean Blumer's favorite pupil in the Yale Medical School ten years ago. Dr. Hume speaks the language so well that it is a Changsha game to put him behind the screen and let the native guess whether or not it is a "foreign devil" talking. He has been president of the China Medical Association.

Dr. Hume will this winter talk to Yale Alumni associations the country over. Large meetings are being arranged in the cities.

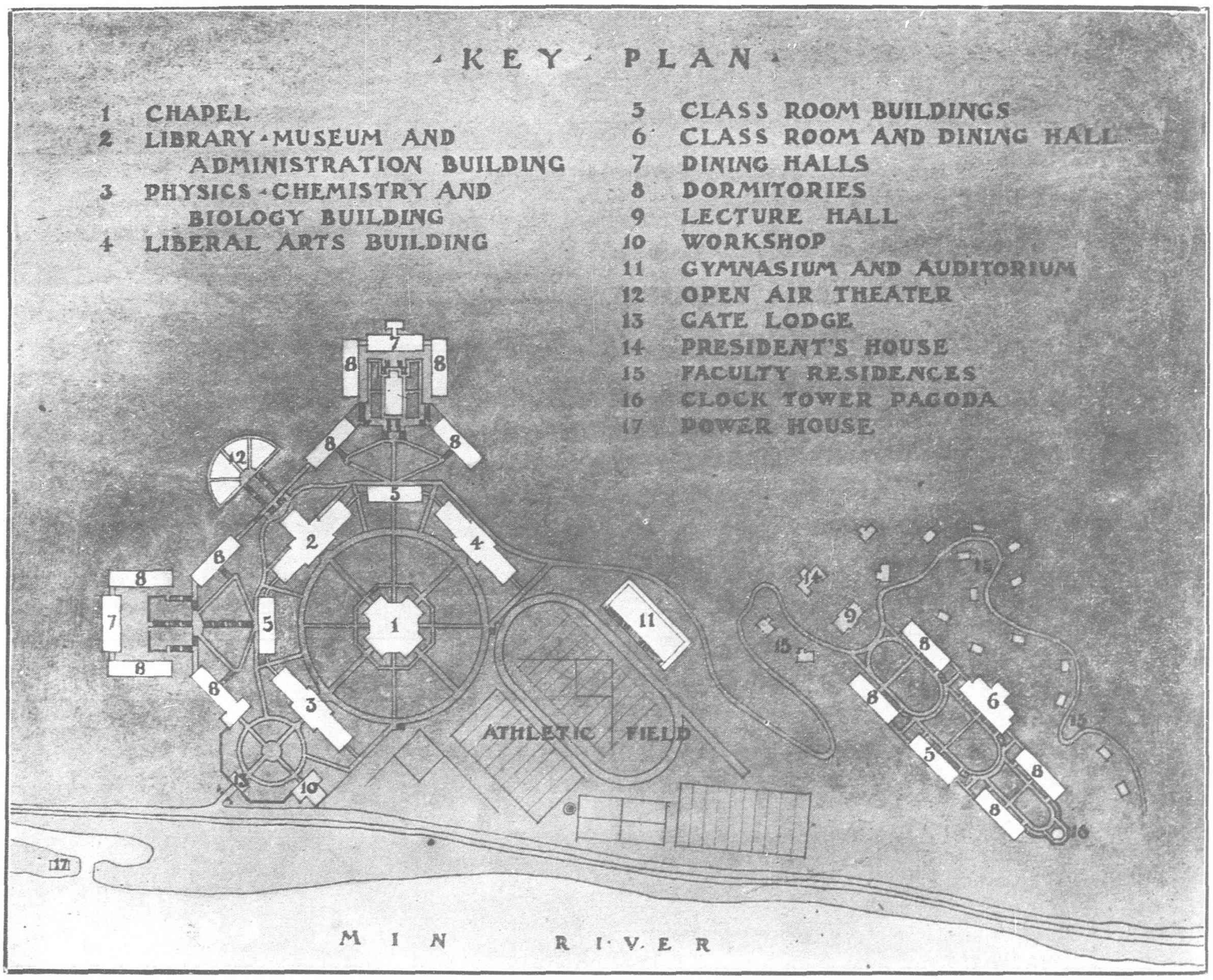
Dr. Yen is so excellent a medical man that the Rockefeller Foundation entrusted to him its hookworm investigation in China. But he is also a statesman. It is largely he who has lined up the gentry and literati in support of the hospital and medical school, and now the provincial government makes an annual grant of $50,000 a year to the work. This the Chinese paid until of late the perturbed condition of the country due to the factional fighting of the Chinese, and the depreciation of local currency interfered to an extent. But these high-class Chinese are not quitters; some very pretty stories have come of the sacrifices, of money personally advanced, etc., to keep the hospital in operation. In the medical school at Yale are now seventy-five medical students under ten physicians (there are 150 students in the preparatory school; fifty students in the college and fifty of both sexes in the Nurses' Training school). The Chinese like Americans. They can see that our men are able and the natives need counsel in all sorts of matters. The Chinese women can see that the American women are charming, and the foreign children and the home life of the newcomers interest the Chinese. They inter-visit. The Chinese came to believe that the newcomers had no ulterior motives. The Americans lay their dead in China soil; and now their destinies are one.

Best to Chinese

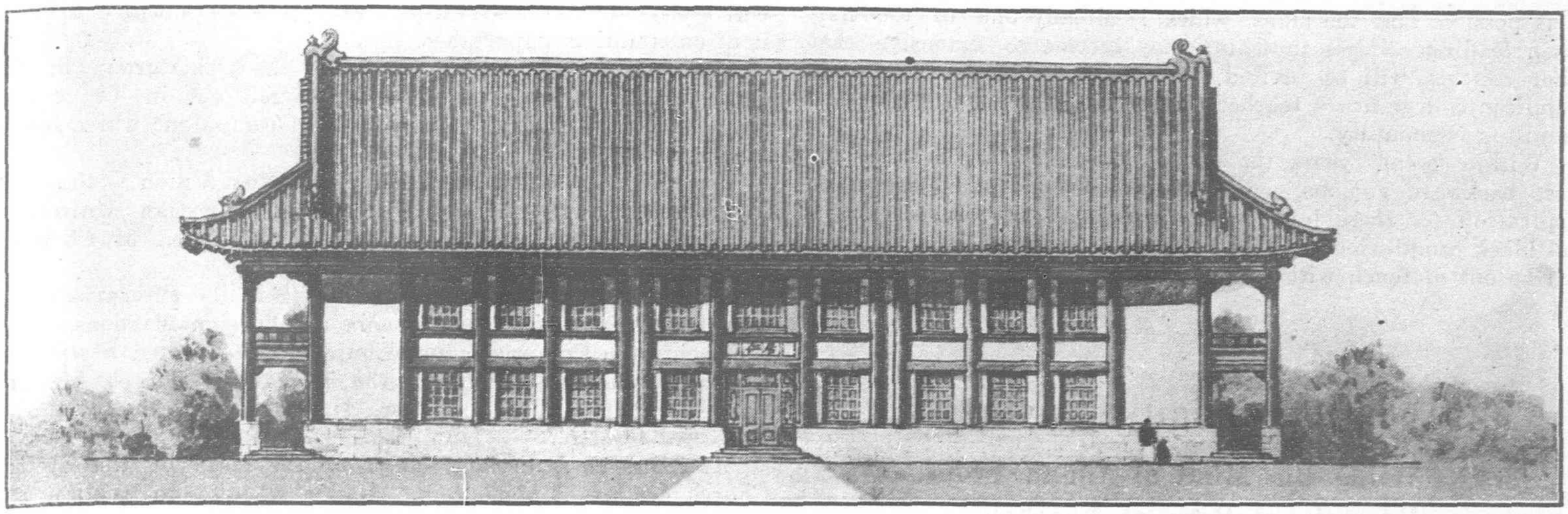
Yale is exemplifying in this project the twentieth century conception of a university. In it is nothing local or narrow. The machinery of instruction is there, but also the vision of an understanding between the East and West. Others talked of "Hands Across the Sea"; Yale sent her men and women to Hunan and actually did it. Yale is the best known college in America to the Chinese, as Yung Wing was the first American graduate (Yale 1854). To Yale come students from seven of the "Eighteen Provinces."

The New Haven Yale is probably getting more out of this venture than the Chinese. Mr. Taft puts it this way: "Every undergraduate thinks bigger thoughts by reason of this great adventure of his college. There can be no declining Yale so long as her sons are doing such timely things as the building up of a greatly undeveloped people. Yale in China typifies the earnest, altruistic side of Yale life."

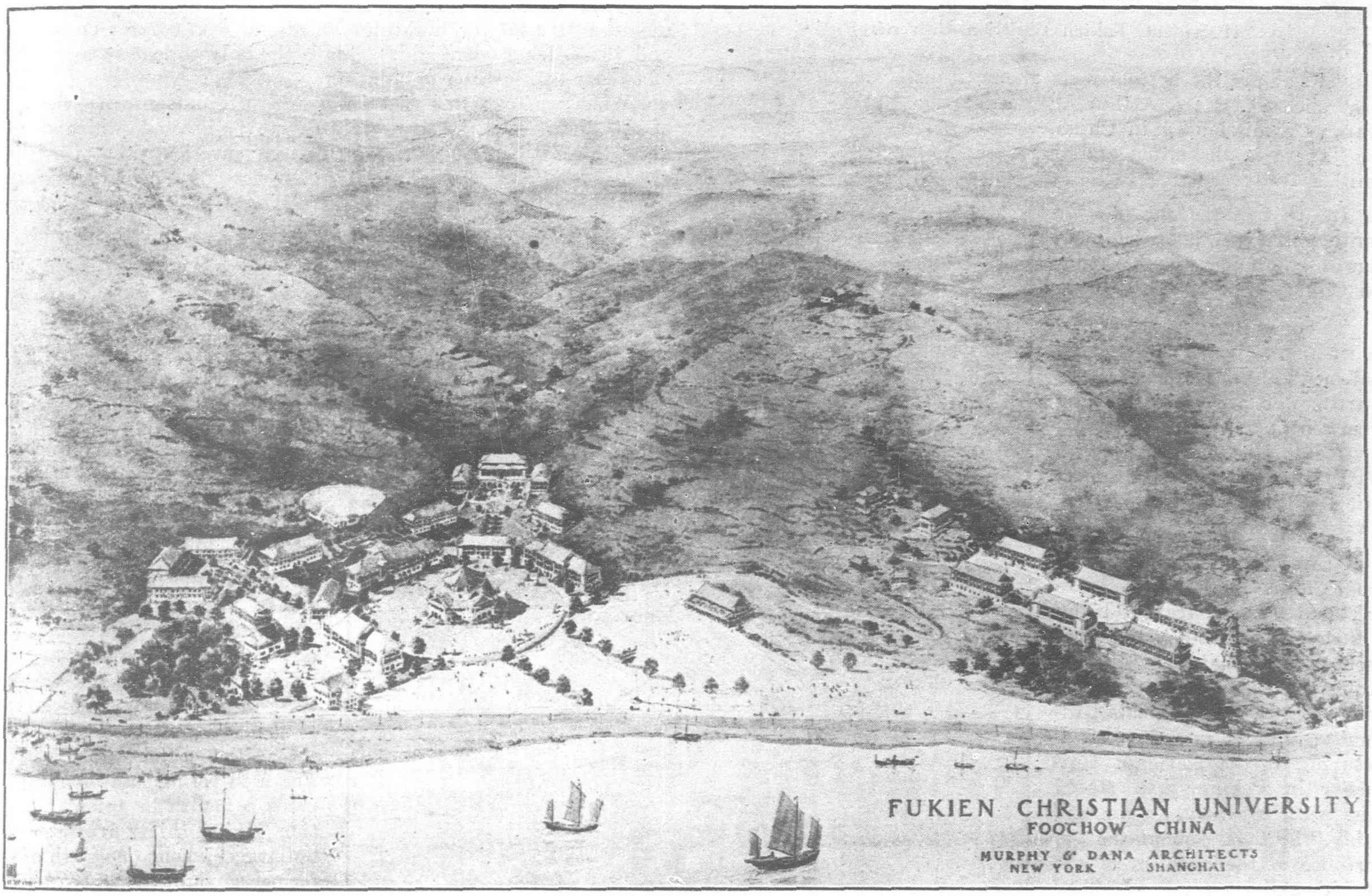
American collegians and their homes will be freed from race prejudice and have large thoughts and look out on world problems in a big way, as they share in such work as Yale is doing.



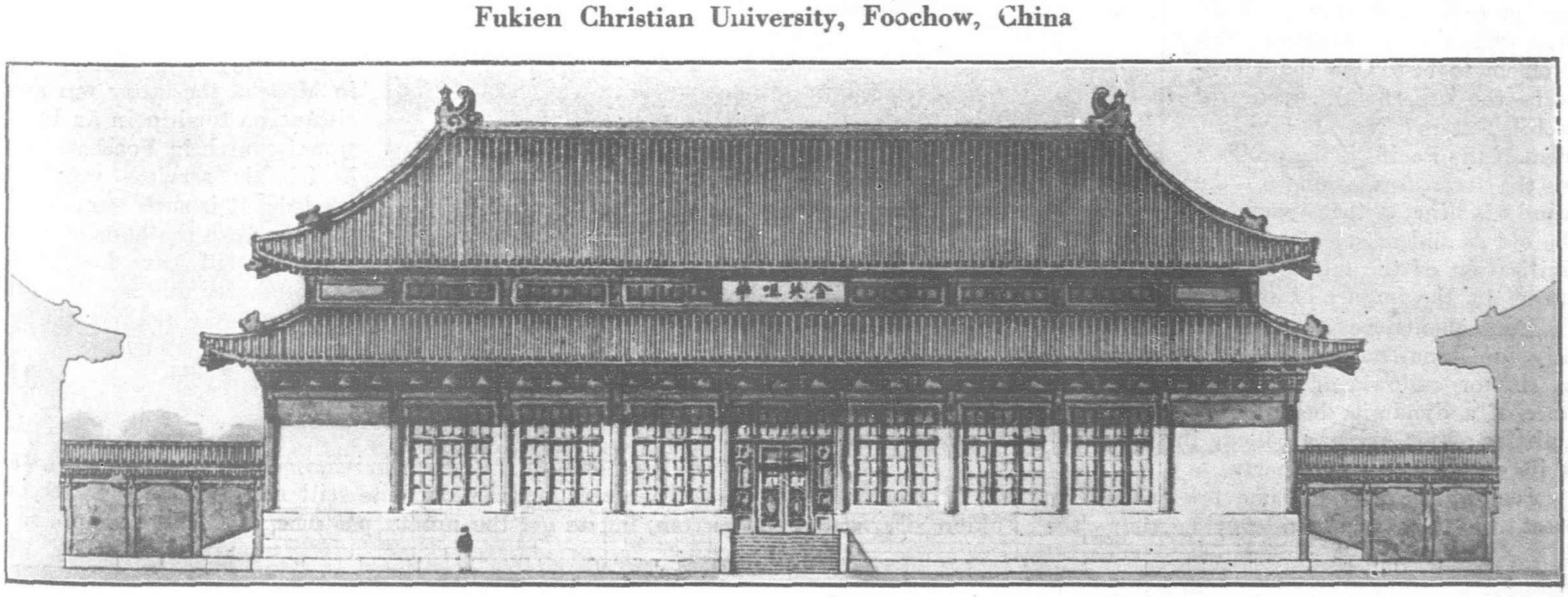
Key Plan Fukien Christian University, Foochow, China



Typical Dormitory, Fukien Christian University, Foochow, China



Fukien Christian University, Foochow, China



Dining Hall, Fukien Christian University, Foochow, China

It is possible that the plant, which is already one of the half dozen leading colleges in China may become so extensive that other colleges will be invited to co-operate. Indeed, already Hamilton college has a teacher on the faculty, supported by the Hamilton community.

Within twenty years the college that is doing nothing for these backward nations, which has no message of education or inspiration for these less fortunate brothers of yellow, brown and black complexion, will be behind the times. Such colleges will be out of touch with an international era.

Fukien Christian University

Transforming the Mind of China From an Educational Base at Foochow

By Edwin C. Jones, M.A.

(President, Fukien Christian University)

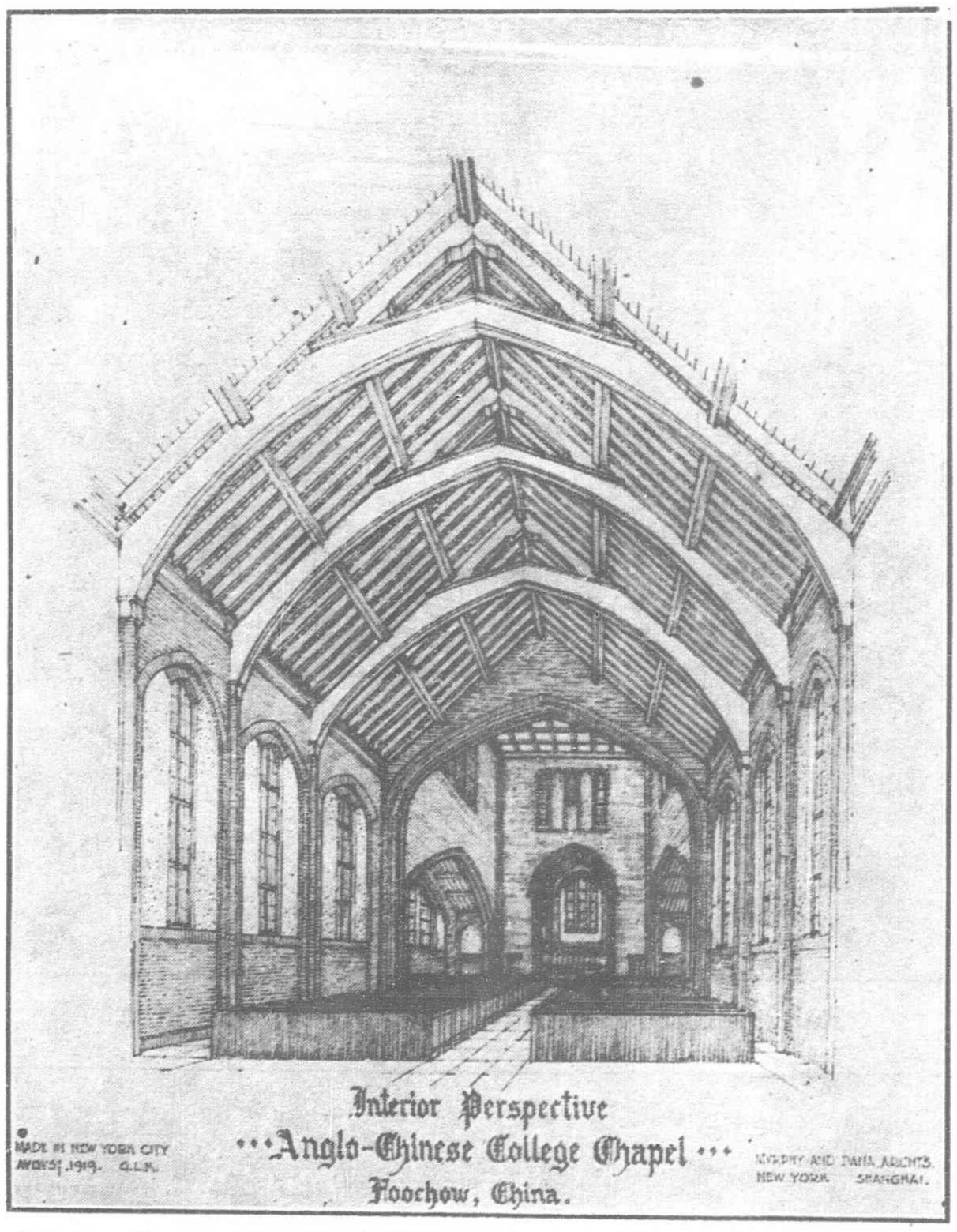
"What are the bottom facts about China!" a tourist in the East once asked Dr. Arthur H. Smith, who spent over forty years as a missionary in China.

"There is no bottom and there are no facts," was Doctor Smith's ready reply.

In that statement Doctor Smith well expressed the feelings of every one who has studied China deeply.

The only persons who would be willing to make a dogmatic statement about China are the tourists who are just landing from a boat or who have made a few months' acquaintance with the European hotels of the coast cities. China is still a mystery, a vast potentiality.

There is one bottom fact about China, however, which can be stated without fear of being presumptuous. To-day the real problem of China's future is the problem of the schoolroom. Prof. John Dewey, of Columbia University, who is now in China, lecturing at the National University in Peking, has stated this fact eloquently. "We talk glibly," he says, "about the importance of the problem of the Pacific, and even the schoolboy can quote Seward, Hay and Taft. But what do we suppose this problem to be? One that concerns the superficial waste of mobile waters? No, the real problem of the Pacific is the problem of the transformation of the mind of China, of the capacity of the oldest and most complicated civilization of the globe, to remake itself into the new form required by the impact of immense alien forces."



Interior Perspective, Anglo-Chinese College Chapel, Foochow, China

Consequently, every college in China has an importance not only to China, but to the world, which cannot be measured by its size or endowment. One might as well measure the importance of a dynamite bomb by its weight, as to measure the possibilities of a Christian college in China by such external things as its enrollment or property.

Just at the present time few institutions are of greater interest to the Christian world, than the Fukien Christian University at Foochow, China. Many causes conspire to make it of outstanding importance.

For one thing, it is the newest of the great group of five Christian union universities which spread out in China like the strategic salients of a great plan of campaign; which indeed they are.

In 1918 the institution known as Fukien Union College was incorporated under the name of Fukien Christian University. It is an impressive embodiment of the union idea of Christian education on the mission field.

Four mission boards are cooperating in the enterprise: the American Board of Commissioners for Foreign Missions, which represents the Congregational Church in the United States; the Church Missionary Society of the Established Church of England; the Reformed Church in America; and the Methodist Episcopal Church.

It comes as a distinct jolt to all the ideas of the average Church-member at home about mission schools, to realize that the Methodist Centenary program for China will put into this institution, merely as their share of a great expansion, the startling sum of $825,167 toward a total of three millions. This includes $122,667 for buildings and land, $697,667 for endowment and $5,833 for student aid. This is the only college in a province of twenty-two million population.

When we take this fact into our imagination with the help of the pictures of the new buildings to be erected, which accompany this article, we can realize that at last the Christian churches of America are attacking the problem of transforming the mind of China in an adequate and statesmanlike manner.

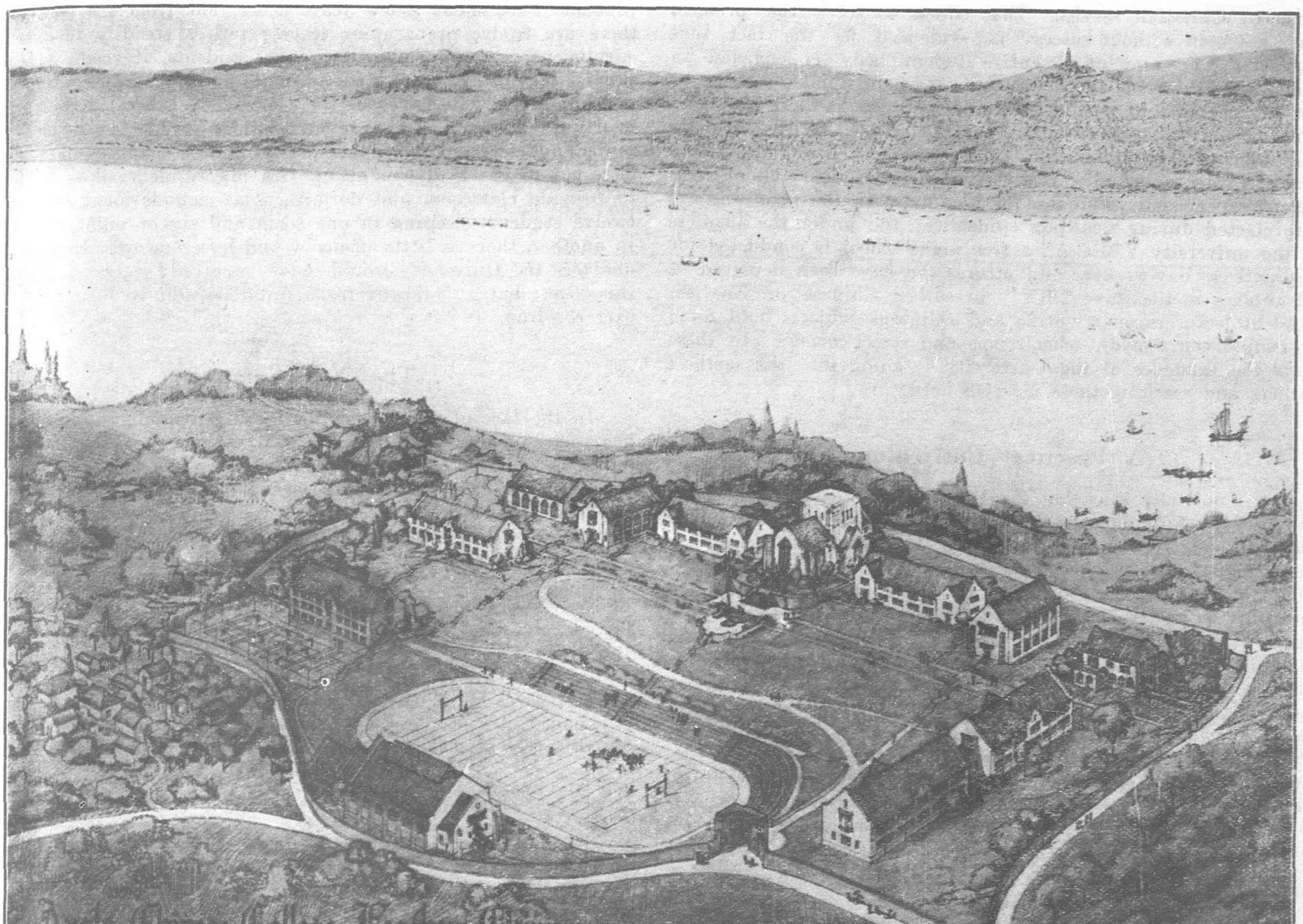
The Human Product

But life is more convincing than figures, and the strongest promise of wonderful results in the Fukien Christian University is not the impressive figure of $3,000,000, but the more impressive exhibit of the strong Christian manhood which the University is supplying for the leaders of the new China.

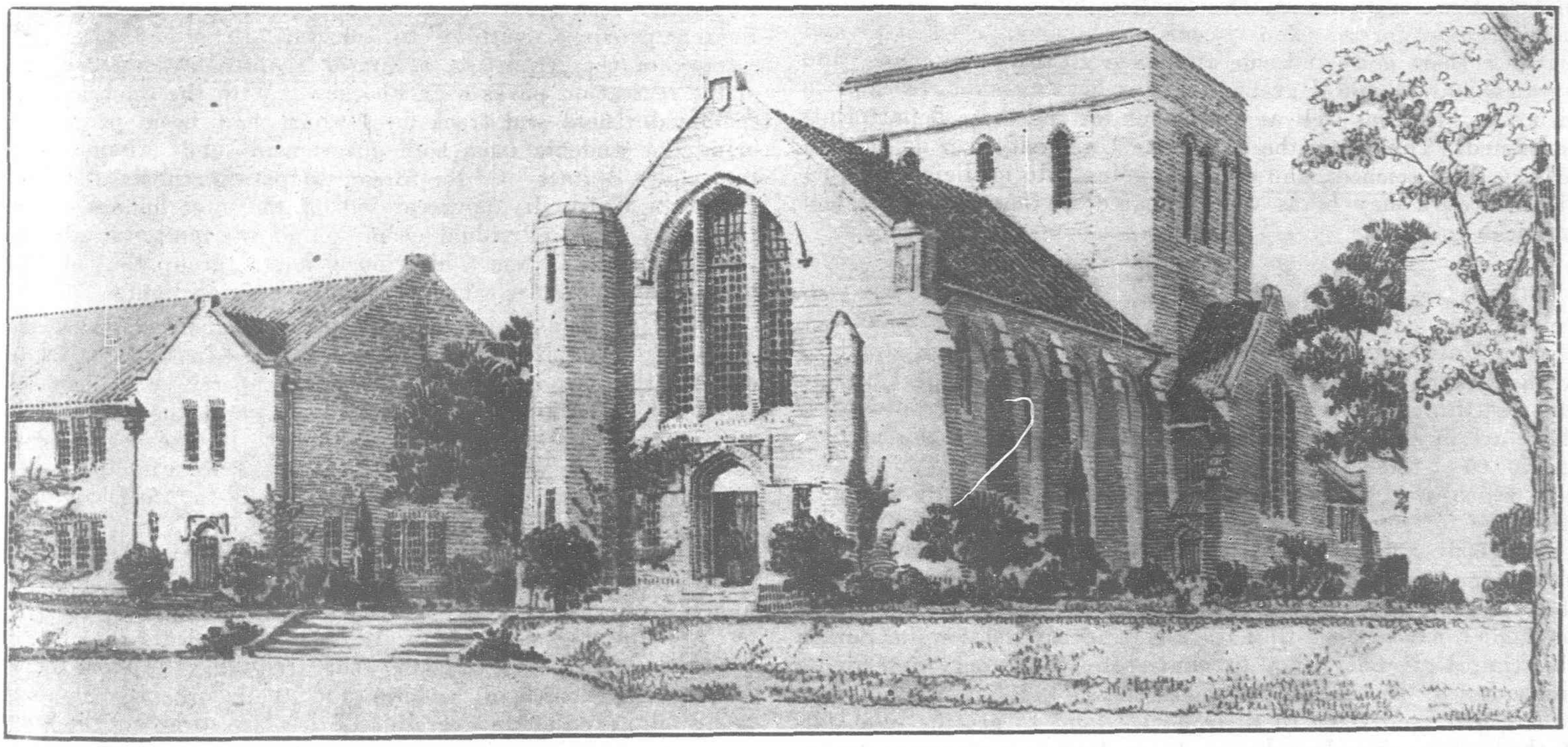
In January, 1919, the first class graduated. One student is now instructor in chemistry in the university. Three are teaching in preparatory schools, two of them planning eventually to enter the Christian ministry. The fifth refused an offer of 200 pesos a month to accept a position giving thirty-five Mexican dollars, or about one-sixth of the former amount. The reason for his choice was that, while the former position offered him a fine opportunity in a Chinese school in Manila, the latter was an assistant pastorship in an institutional church in Foochow, where he felt his services were more needed. It is such sacrifices as this that are the hope of China. Of the present senior class of eleven some will leave for America for graduate study. Others will teach, and still others will go into business or into politics; but everywhere they will carry the light of the Cross, and will labor to serve their fellow men.

Social Service

The problem in Fukien Christian University is not to get the ten per cent. of the students still non-Christian to become Christian, but to get the ninety per cent. of Christians into some



Anglo-Chinese College, Foochow, China



The Chapel, Anglo-Chinese College, Foochow, China

form of Christian service. That efforts to solve the problem have not been without success is evidenced by the fact that seventy-five per cent. of the entire student body is engaged in social service. Some of the students teach in Sunday-schools, or act as assistants to pastors in needy churches. Others lead government-school students in voluntary Bible study. Athletes conduct playgrounds in two centres. Musicians have music classes in the city Y.M.C.A. Medical students under competent supervision vaccinate, for nominal fees, the poor who are unprotected during smallpox epidemics; and under the auspices of the university Y.M.C.A., a free night school is conducted for apprentices, day-workers and others who have been deprived of advantages in the three "R's" in either Chinese or English. Student lecturers on scientific and religious subjects hold forth in temple court-yards, schoolrooms and street-corners. In these ways the influence of the University is going into the farthest corners and reaching those most in need.

A Practical Curriculum

It is not only thus that the University ministers to a needy people. In formulating the curriculum comparatively little thought was given to traditional courses of study. The ever recurring viewpoint was, "What will help the students to be useful members of the society in which they will live? Through the study of modern history, students are brought to see the world of to-day and the necessity for revision of methods that sufficed twenty centuries ago. Comparative government suggests ways of improving current Chinese forms. Biology is studied in its application to better farming, and animal husbandry and a better human race. The first course in chemistry is practical or applied chemistry. A civil engineer, teaching mathematics, makes clear the connection between that science and the everyday life of the world. In short, in each department the aim is to study sympathetically the needs of China, and to bring all the learning of that department to bear on a satisfying solution.

In solving one of China's great needs Fukien Christian University is enabled to bear a large part through the generous agency for healing, known as the China Medical Board of the Rockefeller Foundation. The Board, in addition to aiding in the sufficient staffing and equipping of already established hospitals and medical schools, is building two elaborate medical schools in Peking and Shanghai. It has its own pre-medical school in Peking, but it is also assisting two of the mission universities in the hope that students from there will study medicine in one of the several schools they are making more efficient. Fukien Christian University is one of these two institutions. In this grant are included salaries for four foreign and three Chinese instructors for the department of biology, chemistry and physics. There is a handsome annual grant for maintenance and supplies, and a capital grant for teachers' residences and a science building, as well as equipment for the three departments mentioned. Thus from the outset the University can do efficient work in these sciences, and students going into medicine or other scientific work may be as well prepared as those from the best American colleges.

A Glance at the Future

The University is enabled to do work of this high standard by the system of primary and secondary schools under mission auspices, through which students are prepared for the University. There are in Fukien province alone 27,000 pupils in this system, and 20,000 of these are boys. From this body of boys, the largest from which any university in China directly draws its students, will come for some years a large percentage of the university student body. In addition there is a large group of government school students, of which there will be from two to four millions when the government system is thoroughly established, whose desire for higher education will naturally seek satisfaction in Fukien Christian University; not to enumerate the sons of Chinese emigrants to the Philippines, Formosa and Malaysia, whose fathers will send them to their native land to get the essentials of the culture they love best. It is dangerous to estimate the probable enrollment a few years hence, but from the fact that there are twelve preparatory schools with a steadily increasing enrollment, now approximating 2,000 students, it seems safe to predict that in five years, with adequate buildings and equipment, the university will have, in the College of Liberal Arts alone, nearly 500 students. At present the University is housed in rented quarters entirely inadequate to meet the present urgencies, not to speak of expansion. An old residence does its best to provide classroom and dormitory accommodations; but with twelve students sleeping in one room and six or eight studying in another, there is little efficiency and less comfort. In suitable quarters the University would have received eighty freshmen this year; but only about forty could be admitted for fear of overcrowding.

The New Campus

In the face of these conditions it is fortunate that purchase has been possible of a beautiful site comprising over fifty acres on the bank of the Min river. One of the very first appropriations from the Centenary funds was toward the purchase of this land. On foot-hills which are landmarks for twenty miles up and down the river, will be ranged buildings with graceful Chinese lines, a constant reminder to all who pass of the Christian education within their walls. The firm of Murphy and Dana, with offices in New York and Shanghai, has planned the superb general layout and the individual buildings making up the group. Buildings will range from $25,000 to $100,000, and they will be as beautiful and as enduring as those in America costing many times as much. Construction will proceed immediately; and it is hoped in a year and a half to move to the new quarters which are so sorely needed.

Keen Brains in Sound Bodies

Besides rooms for buildings on the new site, there is sufficient well-adapted space for athletics of all sorts. A gymnasium will be one of the prominent buildings. This will front on a quarter-mile track in which a gridiron and a baseball field will be laid out. Two other gridirons and one other baseball field will be possible, besides numerous tennis courts. Making brains active and doing nothing to strengthen feeble bodies is a poor investment of energy and money. Whole men are necessary to cope with conditions in China, even more than in the United States. The University aims to send out men equipped physically, as well as mentally and spiritually, for the battle of life.

A good start has already been made in this direction, as will be readily seen from the following incident. The governor of Fukien province, wishing to celebrate in fitting manner the signing of the Armistice, arranged a three-day festival in one of the recreation parks near Foochow. With the celebration was combined a field and track meet which had been projected to bring the students from both government and mission schools into closer contact. Of the fifteen competing schools, the Fukien Christian University boys carried off the most honors and won the meet. The individual champion of the meet was also from their number. It was a hilariously happy group that assembled to have their picture taken in the dim evening light.

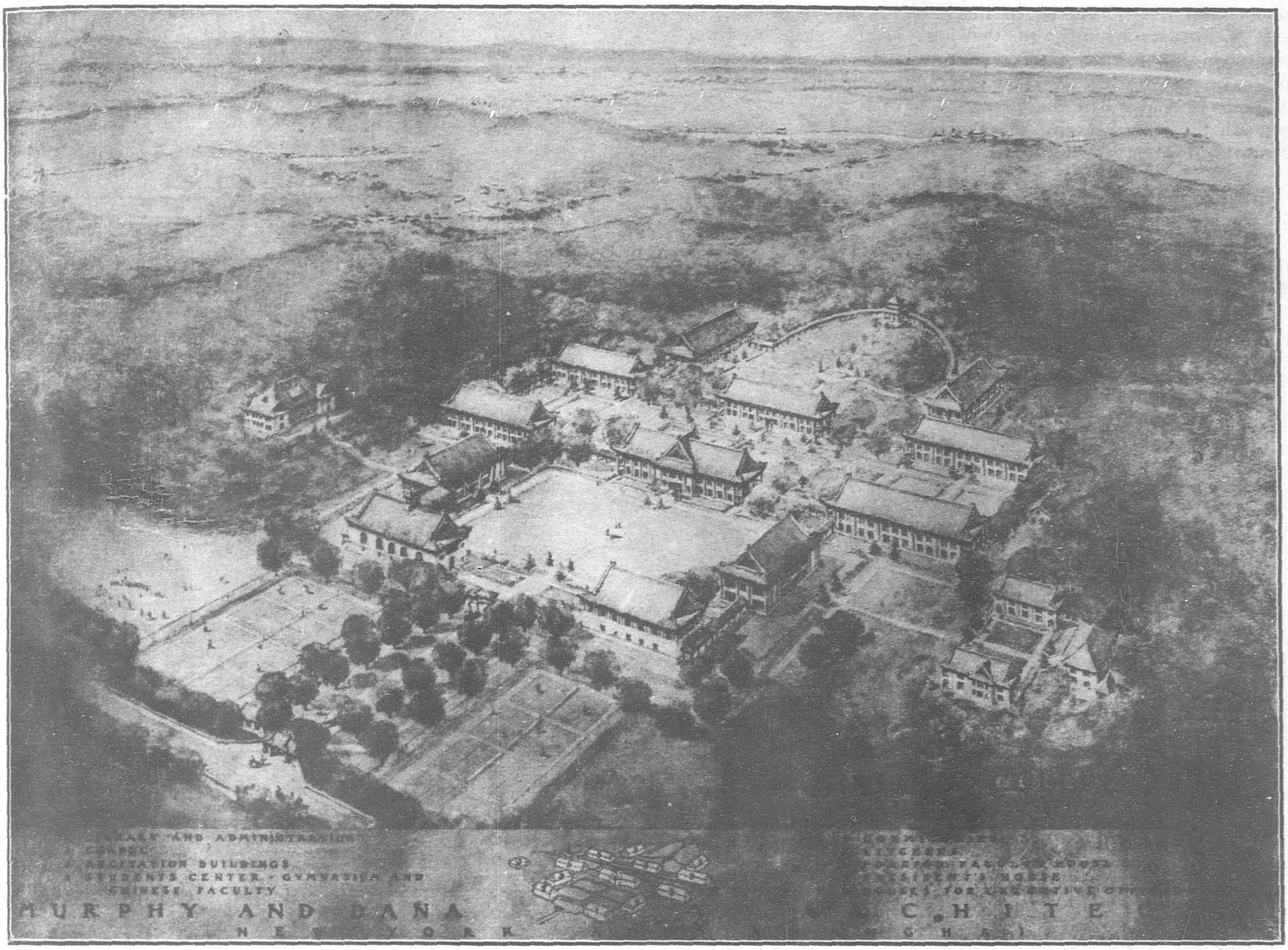
Mention should also be made of another circumstance which makes the institution truly international. In 1918 the trustees, seeking the corporate right to hold property, were granted a charter by the Regents of the University of the State of New York. This also enables the graduates to receive degrees having the stamp of a well-known institution of learning upon them. From the records which our students make in American institutions when competing with American students, it may be asserted that the standard maintained in Fukien Christian University compares very favorably with that in the best American colleges and universities.

And, in the last analysis, it is by its students that an institution is judged. These young men are going out from the University as well-trained leaders, and their influence is already being felt; even as undergraduates they are directing the student sentiment in this capital city, and in the province.

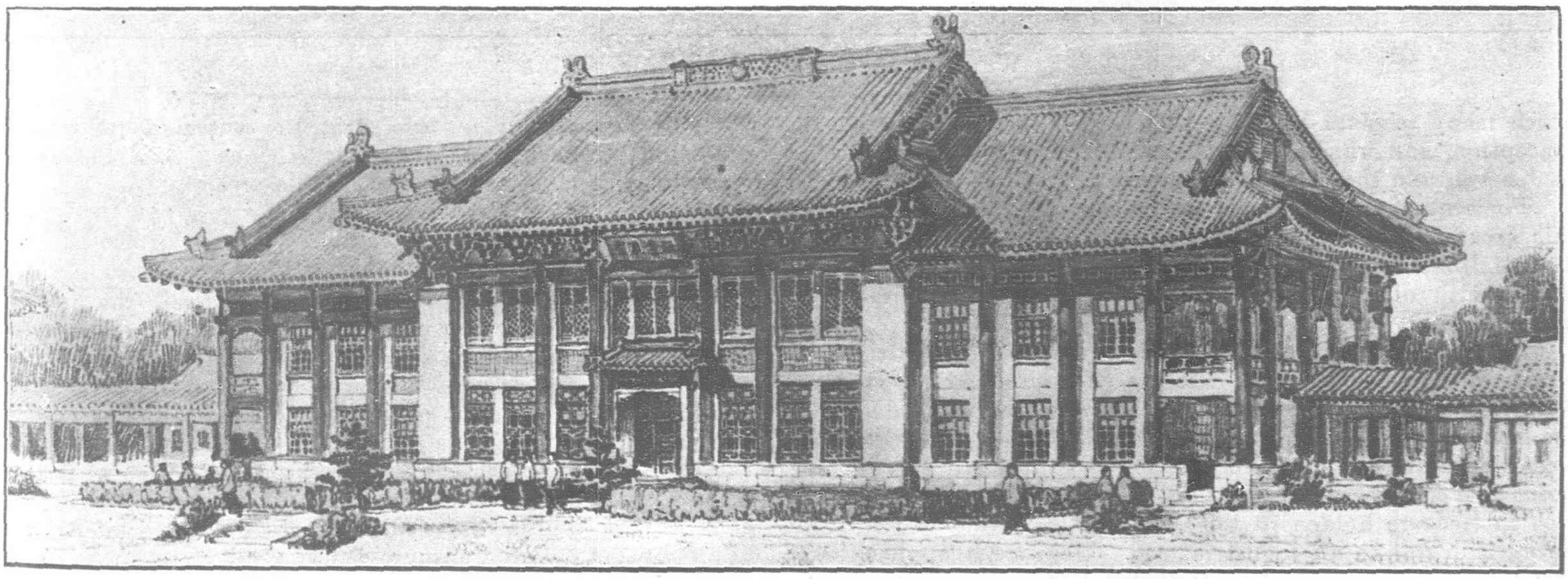
Peking University

A University in the Heart of the East

In the daily speech of the Chinese, their country is always referred to as "Chung kwo"; which, literally translated, is "The Middle Country" or "Middle Nation." Originally the Chinese believed that they were the central people of the world, all other nations being on their border; and the progress of the world-movement is making, in a new sense, the name "Middle Nation" real again. Before the United States Senate, on July 29th, 1852, William H. Seward said: "Who does not see that henceforth the Pacific Ocean, its shores, its islands and the vast region beyond, will become the chief theatre of events in the world's great hereafter?" It took a prophet to see this seventy years ago; any thoughtful readers of newspapers, books and periodicals can see it to-day.



Ginling College, Nanking, China



Social and Athletic Building, Ginling College, Nanking

The National Centre of China

Central in the life in this central land lies Peking, well-called "The Capital of Asia"—for nine centuries an Imperial City, and now the Capital of the oldest living nation and the most populous republic in the world.

In itself it is a wonderful city. The northern, or Tartar City, is really three concentric cities; the inner two being The Forbidden City and the Imperial City. Here are the ancient palaces, the government buildings and the legations The main commercial life is centred in the Southern or "Chinese City"; yet within its bounds, in the quiet of a vast, well-wooded enclosure, is the Altar of Heaven, one of the three great worship-places in the world. Here at early morning on the twenty-first of each December, in the presence of no idol, but standing beneath the open heavens, the Emperor offered the annual sacrifice to "Heaven," or to "Shangti"—the latter a term for God which many scholars believe represents an ancient monotheistic conception, and which, to-day, is used widely in China to refer to Jehovah and the Christian conception of God.

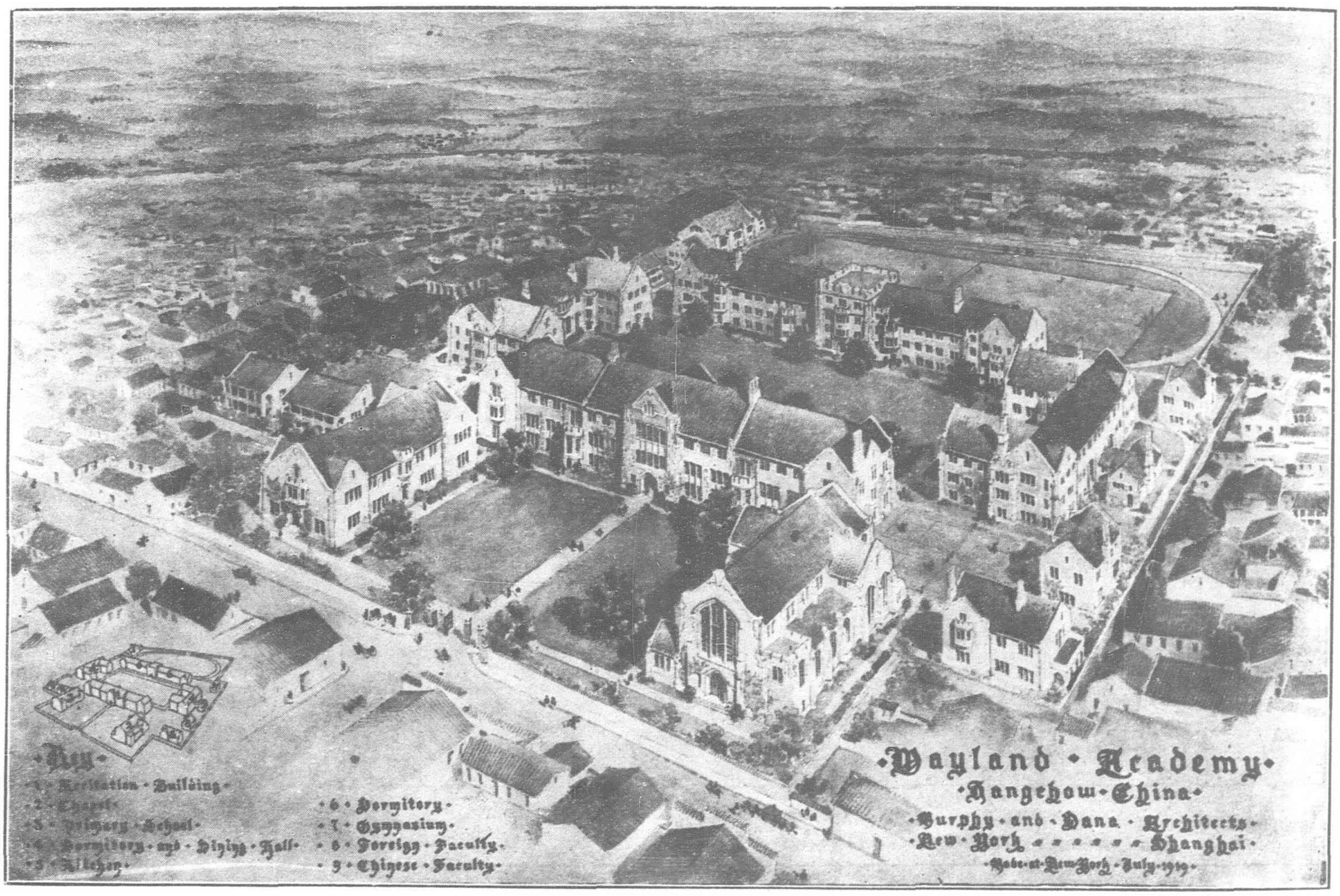
For centuries a quarter of the human race has looked toward this great and unique city of Peking with the eagerness of the Jew to Jerusalem and the Mohammedan toward Mecca. In this storied city of the East is to be seen to-day the ferment of many forces.

Here are the intrigues of foreign powers for political or economic control. Here are felt the efforts toward internal reform among the better spirits, which are becoming articulate in the remarkably organized and sustained student-movement, the most significant movement in China to-day. Here at this vantage point men may study a vast nation—economically poor, potentially rich in treasure hidden in the soil; just beginning to pass from an agricultural to an industrial age. Here are the educational institutions which are making the capital one of the great student centres of China.

Add to all this an unending succession of the ancient monuments and picturesque palaces of the past, the vivid cosmopolitan life of the present, and the thrilling promise of the future greatness that awaits Peking; and the resident, the traveller or the student of world-affairs recognizes that here is the most fascinating city of the Orient.

China's Educational Centre

With the fervent nationalism now stirring among the young men and women of China, it is no wonder that they are coming to Peking in large numbers for their education; it is estimated that there are more than 20,000 students in Peking at the present time. It is significant that the Rockefeller Foundation, after deciding to aid China by furnishing her with the most scientific type of medical education, located its magnificent medical college in Peking. The importance, to the Christian Movement, of being worthily represented in this strategic centre of political and educational influence is sufficiently obvious. And Peking University has been founded to render this service.



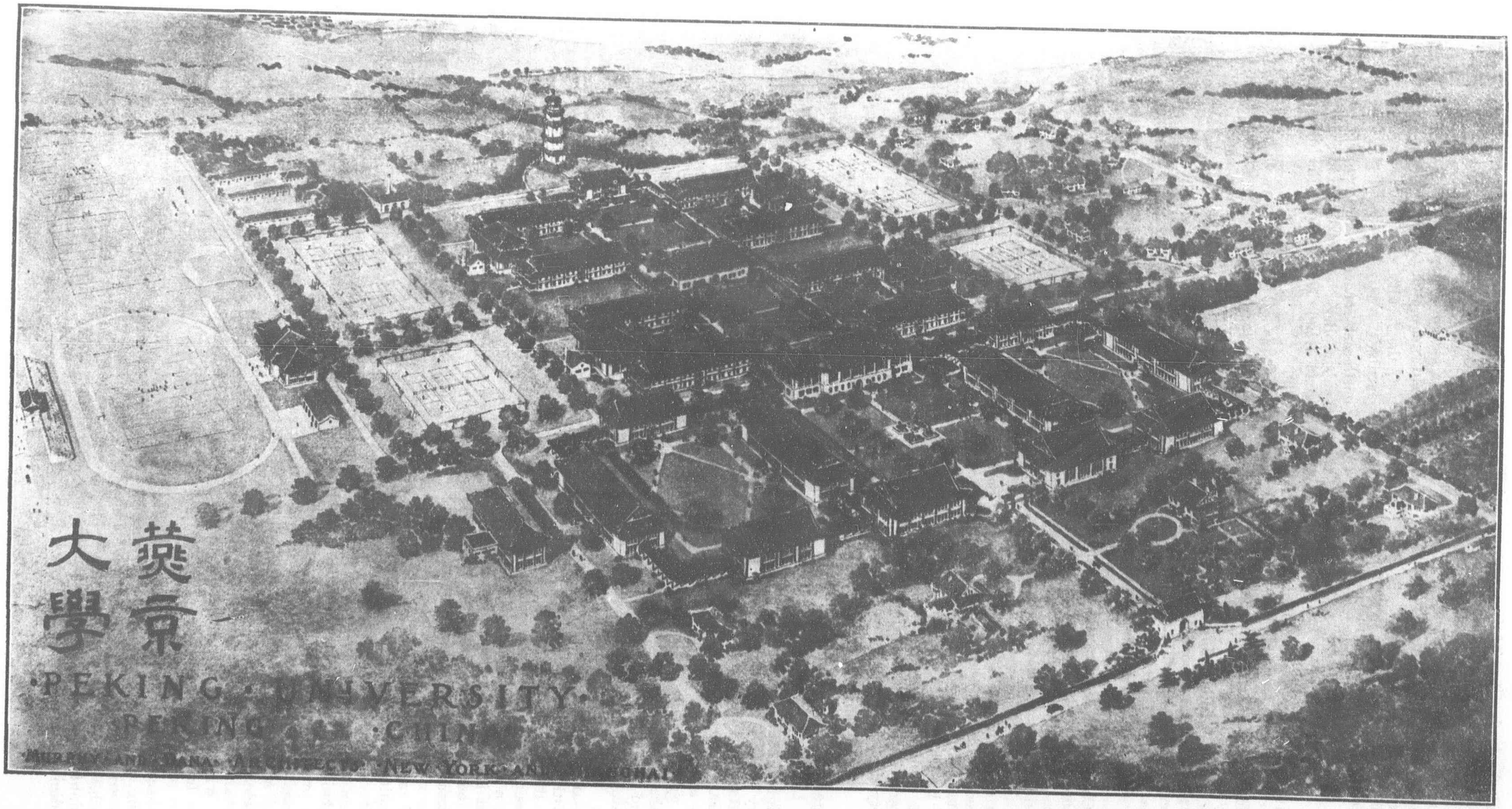
Wayland Academy, Hangchow, China

Peking University

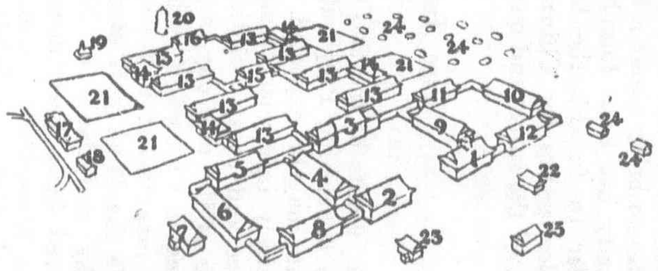
Peking University represents a union of all the Christian institutions of higher learning in or near Peking. These institutions include two colleges and one theological seminary for men, and a college for women. Upon this solid foundation is being reared the super-structure of a great university in Peking, "The Capital of Asia."

The University consists at present of a College of Arts and Science, with a course standardized under the laws of the State of New York, and leading to the degree of Bachelor of Arts; and of a School of Religion, open to college graduates.

It is hoped soon to add a post-graduate course in Arts, and other graduate courses, such as a School of Journalism, a School



1 CHAPEL
2 ASSEMBLY & STUDY HALL
3 LIBRARY & ADMINISTRATION
4 SCHOOL OF ARTS & SCIENCES
5 SCHOOL OF JOURNALISM
6 SCHOOL OF EDUCATION
7 PRACTICE SCHOOL
8 SCHOOL OF RELIGION
9 CHEMISTRY & PHYSICS LABORATORIES
10 BIOLOGY AND GEOLOGY LABORATORIES
11 SCHOOL OF AGRICULTURE AND FORESTRY



12 VOCATIONAL TRAINING
13 DORMITORIES
14 DINING HALL
15 Y.M.C.A. AND SCHOOL CENTRE
16 INFIRMARY
17 GYMNASIUM
18 FIELD HOUSE
19 POWER HOUSE
20 WATER TOWER
21 TENNIS COURTS
22 PRESIDENT'S HOUSE
23 VICE-PRESIDENT'S HOUSE
24 FACULTY RESIDENCES
25 MAIN ENTRANCE

of Education, and various technical schools. Special departments adapted to existing conditions in China are also being planned, such as Sociology, Political Science, Industrial Chemistry, Agriculture, Forestry and Animal Husbandry; and a Pre-Medical course, preparing students for the rigid requirements of the Rockefeller Medical College.

With the University is affiliated Yen Ching College, the department of Arts and Science for Women, under the direction of Dr. Luella Miner.

What Peking University Seeks to Do

Hon. Paul S. Reinsch, for the past six years American Minister to China, said:

"Altogether there appears to be no opportunity in educational life of to-day of quite such scope and possibility as that of a Christian University cultivating liberal and scientific studies at the Capital of China."

Julean Arnold, American Commercial Attache at Peking, said:

"The leaders of the new China must be men and women of strong Christian character. One could not conceive of a better opportunity for training such leaders than a first-class University, of national importance, situated at the Capital, and under Christian auspices."

The hope of China lies in the training of a new type of young manhood and womanhood who have the education and the character to bring about a better political and social order. The University has been founded by Christian leaders of the West in order to furnish the best quality of intellectual and religious leadership for China; and its aim is to train men and women of the spirit and quality that can create a new China.

The Immediate Future

The plants of the two original colleges have been given over to two flourishing Preparatory Schools from which many future students may be expected. But the University itself is housed in entirely insufficient temporary quarters It is now necessary to erect and equip buildings adequate to the surpassing possibilities of the new day, and worthy of the Christian Movement centring in China's capital--the Heart of the East.

A magnificent new site of 150 acres has been selected just outside the West wall of the city; and plans by the Architects, Murphy and Dana, of New York and Shanghai, have been approved for a permanent plant for the University which will require $2,000,000 to build, with an additional $1,000,000 for the Women's College adjoining it. The accompanying bird's-eye perspective shows the University as it will look when it has developed to 1,000 students; a further expansion of 1,000 additional students can be housed in four more dormitory units, in the four spaces shown laid out as tennis-courts, the Women's College, not shown in the picture, will be in the open space at the right.

As there is a general agreement that it is especially desirable, in Peking, the Capital City, to preserve the splendid heritage of Chinese architecture, the new buildings for Peking University are designed in an adaptation of the native style as exemplified in the beautiful buildings within the Forbidden City. The buildings will be of fire-proof construction throughout; and the structural concrete columns will show on the outside, in true Chinese fashion, with tinted stucco panels between. The roofs will be of bright-colored Peking tiles.

Not only the individual buildings, but the general plan as well will be thoroughly Chinese, with a series of spacious rectangular court-yards, laid out on long axis and vistas. The general plan is as follows:

Formal avenue of approach, from Chinese gate at main entrance on the east, leading up to main academic quadrangle.

Secondary academic quadrangles, adjoining the main quadrangle on the north and south.

Dormitory group, continuing on main axis; arranged in small quadrangles, with a dining hall and kitchen for each pair of dormitories, forming four units for 256 students each; with a students' centre and Y.M.C.A. at the centre of the whole dormitory group.

On the west side of the property, the athletic field, with gymnasium, field house and grand stand.

On the east, the faculty residential group, for both foreign and Chinese faculty.

On the north-east corner of the property, separately walled in, the Women's College, separated from the main academic group by a broad avenue leading from the highway to the faculty residential group.

At the west side of the property, on the end of the main axis, a water-tower in the form of a pagoda; which will serve as a landmark for many miles in all directions.

Covered ways join all the buildings in a continuous circulation.

GOVERNING BODY AND OFFICERS:

The Board of Trustees of Peking University are: Luther B. Wilson (President), Arthur Perry (Vice-President), Eric M. North (Secretary), E. M. McBrier (Treasurer), Edward Lincoln Smith (Chairman, Executive Committee), Jas. L. Barton, Arthur J. Brown, Thomas Cochran, John F. Goucher, F. H. Hawkins, William V. Kelley, Frank Lenwood, William P. Merrill, Edward C. Moore, Frank Mason North, Richard Roberts, John L. Severance, Mrs. J. M. Avann, Mrs. Geo. M. Clark, and Mrs. O. R. Williamson.

The President of Peking University, Dr. J. Leighton Stuart, was born in China, and has spent most of his life here with the exception of the period of his education in America. He is a graduate of Hampden-Sydney College and of Union Theological Seminary, with an honorary Doctor's Degree from the former; Dr. Stuart's Greek Reader and Lexicon first made possible the use of the original language of the New Testament for Chinese scholars.

The Vice-President, Henry W. Luce, has been engaged for twenty-two years in educational work in China, during which he has been Vice-President of Shantung Christian University, and for the past two years Secretary of the China Christian Educational Association. He is a graduate of Yale University, and of Union and Princeton Theological Seminaries, with a Master's Degree from Yale.

The Secretary, W. Reginald Wheeler, has been engaged in educational work in China for four years, during which he has been Secretary of Hangchow Christian College. He is a graduate of Yale University and of Auburn Theological Seminary, with a Master's Degree from Harvard.

Ginling College

An Institution for the Higher Education of Chinese Women at Nanking

Ginling College is located at Nanking, China, taking its name from the old classical name of the city. Nanking is a natural centre for educational work, both on account of its geographical position and on account of its language; lying between the great Mandarin-speaking centre of inland China, and the districts of the Wu and other coast dialects.

The foundations of Ginling College were laid not in one institution fostered and developed to meet local needs, but in the schools of Central China, which have been proving for years that Chinese girls were capable of higher education and were nobler and more useful women for having enjoyed such advantages as were offered. These schools have been the pioneers in the field of college education for Chinese women, and Ginling College is following the trail they have blazed. In order that larger opportunities and better advantages for college work might be offered to Chinese women, the leaders in the middle schools of the Yangtze Valley promoted this union college for women.

In November 1913 the representatives of the five Mission Boards which had agreed to co-operate in the college met in Nanking and formally organized the Board of Control. Steps were taken to open the college as soon as possible; and the first class was admitted in September 1915. The college has no preparatory department, looking to the existing middle schools for students ready to do college work.

The Board of Control has thus stated the purpose of the college:

"For the furtherance of the cause of Christ in China; for the advance in education necessary to provide trained leadership; for the education of Christian women for Christian service; and for the promotion of higher education under Christian influence; this college is founded."

Has Board of Control

The Trustees of the University of Nanking, having added to their number five women who represent the Board's co-operating in Ginling College. act as the college trustees; delegating certain powers to the Ginling College Committee. to whom all questions relating to the college are referred. The Board of Control administers funds received from Trustees and Boards; appoints president and faculty; adopts the course of study, and determines entrance requirements. An Executive Committee of five is elected annually, with power to act on all questions relating to immediate needs of the college.

The students are organized for self-government, and bear the responsibility for ordering the daily life within the college, thus training themselves in self-control and co-operation. Class organizations plan for various college entertainments; a current-events club meets every other week, alternating with an English club. The college Glee Club has weekly rehearsals and gives two concerts yearly. Frequent exchanges of hospitality between the faculty and student-groups help to foster friendly relations. Lectures by outside speakers on various subjects related to the college work help to broaden the outlook of the students

The students attend Sunday services at the different city churches. Faculty and students attend a daily chapel service at twelve o'clock, led by the members of the faculty and by occasional visitors and outside speakers.

All students as soon as possible after entrance are given a thorough medical examination and every effort is made to preserve and improve their health. Regular exercise is required three times a week in classes under a physical director. Tennis, volley-ball and other games are arranged for, and all forms of open-air activity are encouraged.

For admission to the freshman class candidates must offer eighteen points of middle-school work—a point being a full year's work in a subject, five periods per week of class-room work with equal time required for preparation. All students are examined upon entrance in Chinese and English. These examinations are general tests of ability to do what is required in the work of the first year.

Library in English and Chinese

The college has a carefully selected library of over twelve hundred volumes in English and over five hundred in Chinese, which is increased annually as the work calls for more books. Twenty-five magazines and periodicals are provided for the use of faculty and students.

The college has occupied up to the present a large official residence in the south-east corner of Nanking. The college has now outgrown these quarters, however, and land has been purchased near Nanking University for a group of buildings to provide for four hundred students. The accompanying bird's-eye perspective shows the completed group, in the Chinese style, as planned by the Architects, Messrs. Murphy and Dana, of New York and Shanghai; the other picture, the Social and Athletic Building, illustrates how well the beautiful Chinese architecture can be adapted to the requirements of modern college buildings.

The President of Ginling College, Mrs. Lawrence Thurston, has been engaged in educational work in China for eighteen years; and is a graduate of Mt. Holyoke College. Other members of the faculty are graduates of Smith, Vassar, Goucher, Oberlin, Bryn Mawr, Michigan, Illinois and Columbia.

The Anglo-Chinese College at Foochow

A Preparatory School for Boys

One of the most important of the educational institutions in Foochow, the capital of the province of Fukien—a noted centre of educational work—is the Anglo-Chinese College, supported by a union of several mission boards. This institution is now housed in a group of well-built buildings on the high land overlooking the Min River, not far above the beautiful stone "Bridge of a Thousand Ages," celebrated in the art and literature of China.

When the present buildings were planned, it seemed that they would be adequate for all future needs; but the institution has done such good work, and expanded so rapidly, that it has now become necessary to seek larger quarters, providing accommodations for at least 500 students. As it proved impracticable to extend the present group, a new site has been acquired a little further up the river, commanding a fine view up and down stream, and across to the left bank, where most of the teeming native city is located. In the fall of 1918, Messrs. Murphy & Dana, of New York and Shanghai, were engaged to design the new group of buildings for this splendid site; the accompanying illustration shows how the group will look when completed. In accordance with the strong desire of the President of the College, Dr. Gowdy, the new Anglo-Chinese College buildings have been designed in the collegiate Gothic style, recalling the beautiful buildings of England in which Dr. Gowdy received his own education.

While many of the students will go, on graduation, directly into their life work, it is expected that an increasingly large number of them will continue their education in the great new Fukien Christian University, described and illustrated elsewhere in this issue.

Wayland Academy

A School for Boys at Hangchow, China

In the city of Hangchow, a half-day's train journey south from Shanghai, and not far from the beautiful West Lake for which this ancient capital of China is famous, is situated Wayland Academy—a school for Chinese boys, supported by the American Baptist Foreign Mission Society. At present the school is housed in some cheap buildings, which served well enough during the preliminary period of the school's growth, but which are now totally inadequate. Two years ago a movement was started to replace these buildings gradually by a group of modern buildings; and Messrs. Murphy and Dana, of New York and Shanghai, were engaged to study the problem and work out a scheme not only for the buildings needed at first, but for the entire future development. The accompanying illustration shows how this group, in the collegiate Gothic style, will look when completed.

The importance of athletics in the education and development of the youth of China is illustrated by the inclusion in this group of an athletic field, including running track, even though the restricted area of the property has made it necessary to use three-story buildings, and to condense them into units of greater length than is customary.

At present there are about 200 students in attendance. The group shown in the accompanying illustration is planned to accommodate a total of 500 boarding students and 200 or more day scholars. As the chapel, seen in the foreground, will be used for outside religious work as well as the ordinary school services, it has been planned to seat a thousand; and will be one of the most imposing Christian church buildings in the province.

Coal Mining in Anhwei

THAT China is a veritable Aladdin's cave in regard to coal is universally admitted, but even experts seem to differ as to the exact distribution of this almost inexhaustible supply. The single province of Shansi, for example, is reputed to contain enough coal to provide the whole world for one thousand years, but the wealth of coal strata in other provinces is even to-day but imperfectly known. Anhwei, according to foreign experts, is only a variable quantity in this respect, though Chinese accounts paint a more glowing picture.

One foreign estimate (1910) says that "coal exists in considerable quantities, but it needs energetic development; and friendly co-operation between the foreign concessionaires and the local Chinese is absolutely necessary to success. During the last fifteen years the coal from the Chihchow mines, and from those of Fenchang, Ningkuo and other districts, worked by primitive methods, has been exported in decreasing quantities."

A Chinese official statement throws further light on this subject. For, according to a report detailed by a mining expert of the above Ministry, the picture is even less roseate. The report refers to conditions in Hsuancheng district and shows the criminal stupidity of obstructionists all around. This district is situated within the jurisdictional circuit of Wuhu, a treaty port on the Yangtze River, the foreign settlement of which was opened in 1905. The district city is distant from Nanking, the Southern Capital, 420 *li* (three *li* make an English mile) by water; from Anking the provincial capital, 400 *li*: from Ningkuofu, on the south-east, 90 *li*: and from Taipingfu, on the north-east, 240 *li*. (The latter city is a town of schools and military, with native iron and copper works and some manufacturers of vermillion.)

In this district fifteen capitalists have applied for permission either to prospect or to mine for coal in eleven distinct places, but so far it appears only two have been given the requisite official permission to go ahead. Consequently of 25,275 *mow* (or 4,212 acres) involved in these applications less than 2,000 *mow* are being seriously looked into. The rest is still buried under the pyramid-like opposition and obstruction of the officials concerned—from the district magistrate or provincial mining bureau to the Ministry in Peking.

In some cases operations had already begun before the benumbing hand of officialdom descended upon the unhappy fortune-seekers; in others everything had been got ready, and all that was necessary to produce wealth was the preliminary official permit so to do. But the permission never came or the official ban was never lifted, and added to this was the Chinese knack of irresponsibility—the successor never willing to do or undo his predecessor's Gordian knots. In the circumstances, the coal resources are still awaiting the day when the magic hand of an enlightened officialdom will provide the open sesame and then the story of mining in this or any other province in the Republic will be totally different.

To show the possibilities of the future in this district we will outline the present conditions in three of these places. In the ordinary case coal mining in this part of the country ought to be a paying proposition, since the district is well served by good communications by either road or water. For example, transportation by water is served by either steam-launches, sometimes as often as once a day, or by ordinary junks if in winter months the streams are too shallow for launches. In the near future if the proposed railway between Nanking and Changsha (capital of Hunan Province) is completed, it will solve further this problem of transportation, as the line will also go through this district. The climatic conditions are none too severe in either summer or winter, and work can continue the whole year round. Timber and vegetation abound in this locality or in the vicinity: so the cost of timber for propping, etc., is inexpensive.

On the other hand, there is the great incubus of the *likin* taxation, the rules of which are governed by orders issued by the Ministry of Agriculture and Commerce in Peking. In addition there are the following local impositions: (1) Mining area tax, assessed at five cents per *mow* per year on areas not yet being developed; (2) mining production tax, assessed at thirty cents per *mow* per year on areas which are actually being developed, and (3) mining royalty, levied at one and a half per cent. of the actual market value per picul or one hundred catties. Between Hsuancheng, the production locality, and the destination of the coal there is plenty of red tapeism, and even as near as Wuhu, the nearest treaty port, which is only thirty English miles away, the challenge of at least two *likin* stations will have to be answered by the payment of the proper fees, etc. Then, arrived at the stipulated destination, another small contribution needs to be made to the provincial treasury in the form of Destination Tax—namely, 0.005 cent per picul.

Niu-tzu Shan (Cow and Calthrop Mountain) Mines

The area comprised in these mines measures over 13,538 *mow*, and is now claimed by two owners: one Mr. Ch'en, for 1,430 *mow*, and one Mr. Wu for 12,108.61 *mow*. These mines first became known during the Ming Dynasty (A.D. 1368-1644)—a fact which is proved by the existence of numerous old pits. In 1910, the year preceding the Chinese Revolution, a Mr. Ch'eng first conceived the idea of working them on a stock company basis, but the scheme fell through owing to the delay in obtaining proper official recognition. Until 1913 the mines changed ownership three or four times, but in that year an Industrial Development Company was established and Mr. G. C. Boume, an English mining engineer, was engaged to prospect for coal, etc. The following year the present Mr. Ch'en applied at the Peking Ministry for the necessary permission. At the same time Mr. Wu, representative of the Industrial Development Company, also applied at the Ministry. On a technical ruling the Ministry gave the permission to Ch'en but withheld it from Wu, although the latter's company had been first registered at the Mining Bureau of Anhwei Province. After much controversy Wu consented to Chen's claim, since the latter's area was considerably smaller, and Ch'en was ordered to pay $8,215 to Wu as compensation. Chen demurred and an injunction order having been decreed against him until Wu had first been compensated, the matter reached a complete deadlock and permission is still withheld from both applicants.

According to investigations in the mines operated by the above Ch'en, coal was discovered at a depth of forty feet from the surface ground, the seams being of an average thickness of two feet. The formations run from north-east to south-west and then dip to south-east at an angle of 20 degrees. There is abundance of coal in this region. In addition to limestone there is also silicon, and near the foot of the hills also some faint traces of iron which, however, are of practically no value. The coal produced here is black and light, emitting little smoke. It is not so easy to burn as the "smoky coal" and so is more durable. But the amount of heat generated is considerable and is best suited for stoking high grade furnaces or boilers on board warships. The following is an analysis of such coal made by Mr. Boume:—

Carbon	82%
Density	1.37
Ash	478%
Nitrogen	8.47%
Hydrogen	4.75%
Heating Point	125°F.

The mines are worked entirely by primitive methods. The pits are sunk on an inclined plane, and as soon as coal is reached the excavators dig at right angles to it. On an average the daily excavation is three feet, the height and breadth being each four feet five inches. Fir is used in the mines for timbering and is placed at intervals of two or three feet. These pillars or beams measure five inches in diameter and are all procured locally,

their cost being $24 per hundred, plus an extra $3 odd for transportation and sundry charges--in other words, only 27 or 28 cents per timber. To bail or pump out the water in the mines five bamboo fly-chains are used, similar in construction to those worked with the feet by Chinese farmers all over the country to irrigate their fields. Each fly-chain is put under the charge of one man, and there are five men to each shift for both day and night. The miners go up and down bamboo ladders and carry away the coals in bamboo canoe-shaped baskets. Each of these baskets can hold 80 catties of coal. At 20 or 30 cents a piece, they are good for one week's use. Because the output is still small, the coal is simply piled up outside the pits until the time arrives for carting it away.

In the mines the men use Chinese vegetable oil lamps which are supplied by the mining company. The miners work twelve hours a day, the majority hailing from the neighboring province of Hunan. Where the digging is difficult. the men are divided into three shifts of eight hours each. The head miner gets $10 a month, whereas the others and water-pumpers, etc., receive 22 to 25 cents a day. Each person provides his own meals. In 1917 the average production was 20 to 30 piculs per day.

According to the company's prospectus the nominal capital is to be $500,000 divided into 5,000 shares of $100 each. But the legal status of the concern not having been properly adjusted, the actual paid-up capital is perhaps not much over $5,000. What is immediately wanted is an early settlement of the quarrel between the two applicants Ch'en and Wu, either in the form of amalgamation or incorporation.

The Mien-niu (Sleeping Cow) Mountain Mines

The area comprised here measures 2,104.60 *mow* and there are four applicants for mining as well as prospecting rights. As in the case of the Niu-tzu Shan mines, these mines are known to have been first worked during the Ming Dynasty. In course of centuries most people seemed to have forgotten all about them until a few years ago the natives of the locality suddenly struck coal within almost a few feet of their own doors. Two of these at once began to dig for coal without so much as obtaining any official permission therefor, a distance of only a few hundred yards separating the two "mines." Then the officials got wind of their clandestine operations and at once prohibited further working, and as a penalty for violating the mining laws each owner was fined $500. Other merchants got interested but are still unable to raise the official interdiction. Since then the capitalists concerned have not been able to settle the matter amicably between themselves, and the mining rights are still under litigation.

The quality of the coal here is inferior to that of the Niu-tzu Shan mines, being more smoky and bearing traces of sulphur. The heat produced is not inconsiderable, but, after burning, leaves a great deal of hard ash. It is therefore serviceable for stoking ordinary boilers and furnaces, etc. The method of digging is similar to that adopted in the other mines, and in those opened clandestinely by the above two villagers, coal was reached at a depth of forty to fifty feet. The exporting centre for this locality is Shui-tung-chen, distant 15 *li* by land. The coal is first conveyed from the producing area to this centre by either porters or mules or carts and thence by junks to other destinations. The water communication here is not, however, so convenient as in the case of the Niu-tzu mines; only junkloads of 30 or 40 piculs as compared with launch or junkloads of four or five times this amount. The future completion of the railway from Nanking to Ch'angsha which will run to as near as two or three English miles of these mines, will also solve the transportation problem.

The local timber used is pine, which is worth 200 copper cash for every one hundred catties. Each beam or pillar requires 200 catties of pine, or a cost of 400 cash. The bamboo fly-chains and bamboo baskets used here are similar to those used in the Niu-tzu Shan mines, except that the baskets of the Sleeping Cow Mountain hold from 50 to 60 catties of coal. The cost of transportation from the pits to Shui-tung-chen, the exporting centre, is as follows:—

Porters for every picul	10 cents
Carts for every three piculs	10 cents
Mules for every 180 catties...	10 cents

From Shui-tung-chen by junks to Wuhu the freight per picul is 20 cents. Each junk is capable of holding only 30 odd piculs and the journey to Wuhu (going down stream) requires two and a half days. During the months of November to March, when the water of the river is low, no junks are available and this proportionately increases the cost of land transportation, etc.

Each of the two villagers' mines has over 20 men working and these are paid 20 cents a day, including meals. The average production is about 12 or 13 piculs of coal per day. Between the two, from May to December, 1916, they are credited with a total output of 15,000 piculs. The amount of capital subscribed for this concern is $4,000 each.

The Shuihsiang (Water Lane) Mines

This is one of the two officially sanctioned mines, its permit dating from November 11th, 1915. The owner is Mr. Yang Hsi-fu, and it comprises 277 *mow* of land. It was first discovered about the end of the Ming Dynasty or the beginning of the 17th century, this being also proved by the number of old pits all over the locality. In 1906-1907 a Tsing K'ang Company started prospecting operations, and coal was reached at a depth of 150-ft., the output totalling four to five thousand piculs. Towards the end of 1913 the present An P'ing Company arrived on the scene and forthwith applied for the requisite official permission at the provincial mining bureau, etc. Considerable red tapeism had to be gone through and two years after the permit was granted by the Ministry in Peking.

As it is situated at present, it is fairly well served by communications. Its nearest embarkation point is San-li-tien (Three *Li* Shop) only two miles away, wheras Shui-tung-chen—exporting centre for the Sleeping Cow Mines—and the district city Huan-ch'eng are only distant 25 *li* and 40 *li* respectively. The roads are good for both carts and sedan-chairs. Between March and the latter part of October, when the rivers are swollen, big junks laden with two or three hundred piculs each, can navigate direct to Wuhu. If the rivers are low during the other months, there is still enough water for boat loads of 50 or 60 piculs to be carried away. As the mines get more prosperous in the near future, a light railway may be constructed between the pits and San-li-tien, the point of distribution, so as to facilitate further the problem of communication.

When the present mines were first developed in 1913 the methods employed were the usual primitive appliances, *e.g.*, feet-driven bamboo fly-chains to bail out the water (these were gradually increased from four to forty as the excavations reached greater depth and simple natural means of ventilation, etc. Subsequently when the amount of water encountered at a depth of 300-ft. was more than could be coped with by the native fly-chains, modern pumps were installed, as well as boilers and a wind-mill for operating the ventilators. The inclined plane formation of the pits is preserved and a small railway truck has also been erected within the two shafts. The windlass system of lowering and raising the coal cages has also been installed.

Up to the end of 1917 no coal was reported as having yet been reached, though there was no lack of limestone and other allied stones. So the quality of the coal which could be mined here and the abundance of the deposit are yet to be ascertained. But fragments of coal have been picked up at the foot of the hills near by and these are light and hard, which seem to be of a superior grade to those of the Sleeping Cow mines. The mining area extends N.E.S.W. and dips towards the N.W. at an angle of 30 degrees.

The An P'ing Company has a paid-up capital of $100,000. It employs on the average a monthly total of 428½ men or a pay-roll of $519. These include 40 miners each drawing $8.00 per month, four engine men, two foremen, three carpenters, two cooks, two pump men, two firemen, etc. The indoor staff consists of over ten persons, including the General Manager Mr. Yang Hsi-fu himself, a mining engineer and a medical practitioner.

These receive an aggregate salary of $348 per month, that of the Manager, $100, being the highest. The mines being rapidly modernized, there are two boilers purchased at Tls. 1,350 each. Each consumes two and a half tons of coal (bought from the Sleeping Cow mines) every 24 hours and is capable of generating 128-150-lb. of steam. A carpenter's shop is also provided for repairs, etc. The timbers used for propping, etc., are also pine purchased locally, the price being one dragon dollar for every 450 catties. The gun-powder used for excavation purposes comes to 40 cents per catty, being a mixture of one part of sulphur (this costs from $4 to $18 per picul) and two parts saltpetre (this costs $47 per picul).

It appears that the present mining company was embarking upon a speculative adventure when it started mining operations. No thorough prospecting had been done, but the presence of the centuries old pits and the superior quality of coal fragments picked up in the immediate vicinity were enough for the promoters to clinch the argument. They had hoped to sight the valuable mineral when they dug to a depth of over 100-ft., but to their great disappointment no coal was seen even at a depth of over 500-ft. Meanwhile the expenditure involved has aggregated well over $80 000. The promoters, however, are still hammering at it, as they all had much previous mining experience in Manchuria. So it is to be hoped that for their perseverance, that rare virtue lacking in Chinese industrial life, if for nothing else, their efforts will be rewarded.

Reconstruction of French Industry

Steel

The French steel and iron industry is faced by an eight-to-ten-years' task of reconstruction, says the Associated Press correspondent visiting the devastated regions of France.

Engineering experts, however, say the country's steel and iron production may be much quickened by the mining and metal-treating plants of Lorraine, returned to France under the terms of the Versailles treaty. The seriousness of the loss to the industry by war, nevertheless, is heightened by the great necessity for metal construction throughout the liberated districts and the dependence of nearly 150,000 inhabitants of these regions upon the blast furnaces and metal mills for a livelihood.

In Valenciennes, Denain, Trist, St. Leger, Fresnes, Anzin, and other towns of this district, the destruction suffered as a result of the conflict is estimated at 98 per cent., including the obliteration of the Denain and Anzin works, which were the most important in France.

Of the more than 500 small metal-treating and metal construction plants of the devastated region, Government reports show that 47 per cent. have resumed work, but with only 14 per cent. of the pre-war force. This does not include the large plants, which alone are said to be capable of meeting the country's chief needs in the way of structural material and important machinery taken away or destroyed in the course of the war.

No note of pessimism is intended, it is said, by engineers who forecast a long period of reconstruction before the nation can regain her former place in the iron and steel industry. These men, in support of their position, cite the fact that the work of clearing away the débris of war has not yet been begun at the largest mill, and they say that this is due to the necessity of designing a huge plant, with equipment to cost millions of dollars, and to other preparatory considerations. Actual accomplishments to this end, they say, are being delayed also by the general conditions holding up all construction projects, such as lack of transportation facilities, labor troubles, and shortage of coal and fuel.

It is asserted, however, that progress will be certain and steady with the attainment of half production within five years.

At present many of the smaller plants are said to be devoting their output to the most needy fields. In some instances several small concerns have combined their equipment, inadequate for separate operation, and have thereby created a group of little mills and shops capable of rapid action and able to help in some measure in supplying the crying needs for machinery of all sorts.

Some of the bigger companies are said to be acting deliberately because of the high prices demanded for the equipment necessary for their plants. The unfavorable rate of exchange also, it is stated, has added to this disposition to hesitate, together with the hope that prices will come down within two or three years.

Textile

Forty thousand persons are at work in the French textile mills which only a few months ago were razed or looted by the Germans of their wonderfully delicate machinery. To the correspondent of The Associated Press was given the facts with reference to this industry to-day by French authorities, who arranged a trip to show him the strides made by the nation in reconstruction.

Within a year, government officials and manufacturers agree, production of textile will reach half of the pre-war total, and within two years, these men forecast, the 1914 output will be surpassed.

The wool industry is said to be recovering most rapidly, with cotton in second place. Linen weaving is reported to be slowest in getting back to normal because of the shortage of flax, formerly obtained from Russia.

In Lille and adjoining cities of Roubaix and Turcoing, where the textile manufactories are centered, it is estimated 30,000 men, women and children are now busied with combing, spinning and weaving, and approximately 10,000 are employed in the smaller mills of surrounding towns where progress is slower but is being pushed with equal vigor.

Statistics compiled by the government from necessarily accurate statements, upon which factories are paid reconstruction indemnities, show that in the Lille district on October 1 last there were 36,384 persons working *in 162 textile plants*, compared with 106,066 employed before the war in 265 factories. In all of the 491 textile mills of the liberated regions there were employed in August of this year only 21,027 of the 152,948 persons at work four years ago.

Reconstruction of the textile industry was declared by manufacturers a few months ago to be almost a hopeless task. At least, they said, it would be so slow that France would lose her world trade in textiles. Now, however, a brighter view is being taken, and government figures show the industry has reached two-fifths of normal production. Manufacturers themselves concede the output is at least one-third of that before the war. All agree that rehabilitation is proceeding more rapidly each month, as the looted machinery is being returned from Germany or new installations are coming from England and the United States.

This industrial recovery, which seemed unimposing at first, has been made through the combined efforts of the government and plant owners against difficulties that appear more formidable the closer they are examined.

Direct damage to the textile industry is estimated by the ministry of reconstruction at 20,000,000,000 francs ($4,000,000,000 nominally). In this section of France, the heart of the industry, mills for the most part were knocked to pieces and the rest were damaged. All of the electric machinery, belting, shafting and similar equipment were taken by the Germans, and seven-tenths of the spindles, looms and combers which possessed almost human dexterity were either shipped to Germany or pounded into utter uselessness.

Two out of every hundred machines were left intact, packed and tagged for shipment, but were abandoned by the Germans in their strategic retreat.

The labor problem is not at this time particularly embarrassing to textile manufacturers. The task of replacing the remarkably skilled workers, many of whom are among France's million and a half of dead war heroes, is said to be in the way of solution, because women are more keen than ever for such well paid work, since many of them are widows.

Foreign Trade Convention

The National Foreign Trade Council, which will hold its forthcoming annual convention in San Francisco on May 12 to 15, has invited special trade advisors from foreign countries. Many foreign merchants plan to take advantage of that opportunity to meet American business leaders. American firms having representatives in foreign fields are asking their foreign representatives to visit this country during the convention.

Some thirty foreign nations, representing Central and South America, Canada, Australasia and the Far East, will have trade advisors at this the seventh annual convention according to an announcement by James A. Farrell, chairman of the National Foreign Trade Council, an organization composed of seventy-five leading American merchants and manufacturers engaged in foreign trade. Trade advisors are expected from the following countries: Canada, Mexico, Panama, Salvador, Honduras, Costa Rica, Guatemala, Nicaragua, Dominican Republic, Colombia, Venezuela, Ecuador, Peru, Bolivia, Brazil, Paraguay, Uruguay, Argentina, Chile, Australia, New Zealand, Tasmania, Straits Settlements, Dutch East Indies, Indo-China, India, Siam, Siberia and the Philippines.

In commenting on the presence of the foreign trade advisors, O. K. Davis, secretary of the National Foreign Trade Council, announced that ten trade advisors were being allotted to every foreign nation, commercial representatives of which have been invited to the convention. These special advisors will be chosen by trade organizations in their respective countries.

"These foreign trade advisors," continued Mr. Davis, "will be thoroughly representative of the international commerce of their respective countries. They will be at San Francisco for the purpose of supplying first hand information in regard to the markets of their respective countries. They will not be official Government representatives, but commercial delegates in the true sense of the word.

"The seventh national foreign trade convention will be a gathering of representatives of all phases of the international commerce of the United States. Delegates will attend from all parts of the country, and the opportunity of acquiring foreign trade information will, this year, be an exceptional one, if only through the presence of trade advisors from the various foreign nations."

The American Government's Opinion

of

The Far Eastern Review

From Page 170 *of the United States Department of Commerce Special Agents Reports, No.* 172, *entitled,*

"Electrical Goods in China, Japan & Vladivostok"

"TO REACH THE ENGINEERS IN THE ORIENT, PROBABLY ONE OF THE MOST EFFECTIVE MEANS IS 'THE FAR EASTERN REVIEW,' A WIDELY CIRCULATED TECHNICAL JOURNAL LONG PUBLISHED IN SHANGHAI BY AMERICANS. THIS JOURNAL CONTAINS ENGINEERING MATTER THAT SHOULD BE OF GREAT VALUE TO AMERICAN ENGINEERS WHO ARE AT THE MANUFACTURER'S END OF FOREIGN TRADE IN THE FAR EAST."

Mr. Lamont Explains What the Consortium Does Not Intend to do in China

THE visit to China of Mr. Thomas Lamont, representing the American banks interested in the Consortium, has set at rest a number of rumors and surmises and theories of wiseacres. Opponents of the Consortium have found much of their argument knocked askew, many of their false assertions exposed, and the bulk of their innuendoes disposed of. Mr. Lamont came with a straightforward message and delivered it on several occasions. At the dinner given by the Chinese bankers at Peking he minced no words, and left no room for doubt as to what the Consortium did not intend to do. The corrective he administered was very necessary. The Chinese found to their surprise that he was not in their country frantically endeavoring to lend them money, that he was not athirst for political adventure, that he did not care a snap whether they made a loan or not—and that, in reality, he would prefer that they didn't. The Chinese have not had such straight out talk from a foreign financial representative before. Most other visitors of the kind have shirked telling them the truth, and have not wished to learn too much of it. They have had careers to make and expected to make them through signing up some kind of a loan agreement. Mr. Lamont has made his name in the financial world and will enhance it rather than damage it by adhering to a lofty course with the Chinese, and, if necessary, packing his bag and going home without affording any assistance at all till internal conditions have improved, till peace obtains in the land, and till there is a government in power bearing a mandate from the people of the country. His sentiments are contained in the following speech delivered to the Chinese bankers of Peking, on April 12, and they cannot be repeated too often:

On behalf of my colleagues and myself I thank you most heartily for this cordial welcome. I am delighted to be in Peking, this city of honorable and ancient civilization that antedates by so many centuries the foundation of the American Republic. I am glad to be able to secure all those vivid impressions of beauty and charm and allurement that crowd upon one making his first visit to this Chinese capital. Above all, I am happy to be brought into contact with the Chinese people, to feel these evidences of friendliness for America and to emphasize to you the sincere friendship of America towards China; a friendship that dates back for many years but that has never before, I assure you, been so strong as it is to-day.

Of course, I am expected to say something about the proposed new Consortium. I am glad of the opportunity of doing so, and especially pleased to be able to say something to an audience as intelligent and distinguished as this, because since my arrival in China I have found so many conceptions of the Consortium completely at variance with the facts, so many rumors absolutely false and so many statements completely unfounded.

No Scheme or Plan to Impose on the People

First, then in a word, let me try to correct some of these misstatements. The idea has seemed to prevail that the Consortium is eagerly seeking for an opportunity to come to China and do business. This is not the fact. We are desirous of proffering assistance to China if she desires to receive it, but we have no scheme or plan to impose upon the Chinese people. We all have enough work and enough troubles of our own at home without coming half-way around the globe to assume new difficulties. All of the countries represented in the Consortium are short of working capital. It would be a satisfaction to all of them to learn from me that China did not require our assistance and that we were therefore free to conserve our resources for pressing needs at home. Let me emphasize this point—unless you want us to come we don't want to come and we will not come.

Another misconception prevailing seems to be that I as representing the American Banking Group, am anxious immediately to work out some definite plan for a loan or what not, and that unless I do so, my mission will have failed. Nothing could be further from the truth. I am charged by the American Group to bring to China their cordial expressions of good will, to explain the aims of the American Group, and of the proposed Consortium, and to bring back to America a thorough-going report as to conditions here; but for me to complete any particular negotiations at this time is quiet unnecessary and, unless China desires me to do so, I certainly will not undertake such a task.

The Consortium Itself

Now a few words about the Consortium itself. Its organization is the fruit of a general understanding arrived at over a year ago among the four great Governments involved. The American Government had some months previously, proposed to Great Britain, to France and Japan the organization of banking groups for a new Consortium on a much broader basis than the old one. These proposals contemplated a free and full partnership on the part of the four Banking Groups involved, for the purpose of offering assistance to China in the development of her great public enterprises, such as transportation, possibly reform of currency, etc. Further, it was contemplated that each banking group should turn over to the Consortium such options or concessions as they held, upon which substantial progress had not been made. It was felt that by following such a course as this and by having the four groups work together, there would be avoided for the future the setting up of new spheres of influence that might threaten the integrity of China. It was felt, too, that a Consortium organized along these lines would help in preventing possible jealousies that might otherwise be engendered; would bring into greater sympathy all five Powers involved, including China, which would thus work together for the welfare of the Western as well as the Eastern nations. The American people have always taken as their golden text for China the phrase of the "Open Door" laid down a generation ago by John Hays, and it was with this idea in mind that the American Government proposed this plan in the hope that it would for the future serve to prevent new spheres of influence; would keep open all the doors to trade and to friendly intercourse.

The "Open Door" Policy

At Paris last May, the Consortium was tentatively organized along the lines that I have just indicated, its agreement being subject to the approval of the four Governments. America, Great Britain, and France, as you already know, gave their complete approval. Japan, however, qualified her approval by a desire to reserve from the scope of the Consortium certain parts of Manchuria and Mongolia. Such reservations contravened, in the minds of the other banking groups and of the other Governments, the policies involved in any free and full partnership, and also in the maintenance of the "Open Door." Therefore, we have recently been holding conferences in Japan to see whether the Japanese cared to accept the invitation of partnership from America, Great Britain and France, on the same terms as ourselves. The Japanese banking group has assured me that they unanimously desire to do this. It now remains for the Japanese Government formally to confirm this desire. If they fail to do so and if Japan remains outside the Consortium, I should think that Japan might prove to be the chief loser.

I must emphasize another point upon which there has been great misconception. The idea has seemed to prevail, that the Consortium intended to carry on, or extend its influence over a

vast number of different enterprises, in China, like banking, commerce, manufacturing, etc. Nothing could be further from the truth. As I have already stated, the Consortium plans to deal chiefly with those great basic enterprises the development and establishment of which will make in China a firmer foundation upon which private initiative in banking and commerce can safely build. One eminent Chinese gentleman has been quoted to me as saying that the Consortium intended to dominate Chinese banking, or at least take within its purview certain Chinese banks. This is utterly untrue. We have no such plans; it would be contrary to our purpose; it would be as repugnant to us as it undoubtedly would be to Chinese banking circles.

A Double Responsibility

The Consortium has, as I have said more than once, a double responsibility. Assuming that China desires it to render aid here, it has the responsibility to the Chinese people. We have to see to it that any loans made to China are for constructive, not for wasteful, purposes, and are used for developing the country. In order that both China and the Consortium shall be assured that such worthy objects are being attained, the organization of some proper system of control must be mutually worked out, so that you and we may be certain of the proper application of loan funds. To say that the provision of proper safeguards for any particular loan means the control of Chinese Government finance is absurd. This general idea touches upon the second great responsibility which we must carry, and that is to our own people at home. You bankers readily recognize that the banking groups in America, Great Britain, France and Japan have not of themselves sufficient funds to advance for these great enterprises in China, but must look in turn to that great body of investors, not to the well-to-do alone, but to the rank and file of prudent, thrifty, saving people throughout our countries, and to them the Consortium will have the moral responsibility of seeing to it that their investments in China are properly administered. To them, in due course, we must render an account of our stewardship.

Thus, in order to carry out effectively any plans for works in this great country, the Consortium must count confidently upon the co-operation of the Chinese people and of its banking community, which is growing so rapidly and which is so worthily represented here to-night. Unless we have your good will and trust we cannot take one single step forward. We hope, too, that in a material way China will not rely too much upon the Consortium, but will be able to mobilize her own great latent wealth for purposes of domestic development. The lighter the burden that is laid upon the Consortium, the fewer enterprises that we are required to take up, the better we shall be pleased.

The Consortium Ideal

Finally, let me say in behalf of the American Banking Group—and I know that in this respect I can speak too for the British and French Banking Groups—that we have a very high ideal of the future of China, an ideal just as high, I venture to believe, as that cherished by your own people. In the years to come we look to see a great United States of China just as we have forty-eight states in the American Union, each competent to handle its local matters, yet bound into an indissoluble union under the Federal Government, so we look forward to the time when your great provinces shall handle themselves in the same way under the Republic of China. We look forward to the time when great systems of transportation will render easy the carriage of commodities and goods from one part of the country to another and shall make possible that constant intercourse which is bound to bring understanding and sympathy among all your people. You will recall with me that within the last one hundred years the development of America has been brought about chiefly through the building of those immense arteries of commerce, those transcontinental railways that have developed our great graneries in the northwest and in the southwest, and have made almost as one the wide-parted shores of the Atlantic and the Pacific. In like manner we believe that China can never attain her full statute, her full stability, until similar development has taken place here. To the realization of this high ideal for China all the friends of China desire to work.

You will recall with me that the Consortium has not as yet been fully formed, that it cannot be fully formed and made effective without your own desires and without your co-operation; that it can never become an instrument of great assistance to you unless it can carry on its operations in a country reconciled, united, peaceful, a country where the astonishing industry of your great people can be allowed to develop under conditions of stability, can be carried on under constantly improving conditions of prosperity and contentment.

British Locomotive Building

Important Developments Foreshadowed

The world-wide shortage of locomotives and rolling stock which has resulted from five years of warfare is an obstacle of the first magnitude which must be surmounted before international transport and trade relations can be resumed on anything like normal conditions. One of the largest English engineering firms, whilst war was still proceeding, foresaw that an acute shortage of this kind was to be expected when peace came. The Directors of this firm methodically laid their plans, and those carefully prepared arrangements have now materialised so that at the present time the Armstrong, Whitworth Company are making a remarkable bid for the premier position amongst locomotive builders throughout the world. The Ammunition Works at Scotswood on Tyneside were allocated for the construction of locomotives. Immediately after the Armistice they commenced their reorganization and within the short space of a year the vast munition plant has been swept away, the new plant installed, and the first Armstrong, Whitworth locomotive—a powerful 0-8-0 type for the North-Eastern Railway—was completed and delivered from their Works.

To-day the Scotswood Locomotive Works are the largest and best equipped works of its kind in the British Empire. Their present output capacity is over 400 heavy main line engines per year.

Even under present conditions the Company themselves anticipate that by the summer of 1920 their output will have increased to not less than 45 locomotives per week. The following list which gives particulars of some of the most interesting and important contracts which Messrs. Armstrongs at the present time have on hand:—

Country.	Ordered by	Type.
Great Britain and Ireland	North Eastern Railway Co.	0-8-0 with six wheel tender.
,,	Midland and Gt. Western Railway of Ireland	0-6-0 with six wheel tender.
,,	Caledonian Railway	4-4-0 with six wheel tender.
,,	Gt. Southern and Western Railway (Ireland)	4-6-0 with six wheel tender.
Java	Dutch Colonial Government Railway	4-6-4
Brazil	Leopoldina Railway	4-6-0 with six wheel tender.
Trinidad	Trinidad Railway	4-6-0 with six wheel tender.
Nigeria	Nigerian Railway	Aro class 4-8-0 with 8 wheel tender.
India	Indian State North Western Railway	0-6-0 with six wheel tender.
,,	Bombay, Baroda and Central India Railway	2-8-0 with six wheel tender.
,,	Madras and Southern Mahratta Railway	2-8-0 with six wheel tender.
Argentina	Buenos Aires Western Railway	2-6-2
Belgium	Belgian State Railways	2-8-0 with six wheel tender.

As Philippine Trade Regains its Equilibrium

By Angel Cuesta Guerrero, Chief Clerk of the Bureau of Customs

THE aftermath of the great war has shaken the foreign trade markets of America to their very foundations, and the Philippines, as one of the chief sources of supply for these markets, has suffered no small share of the ensuing losses.

According to the official custom house figures, the balance of trade for the calendar year 1919 was registered against the Islands to the amount of Pesos 11,042,552, a decline of about Pesos 48,000,000 since 1918.

Transporting Tobacco Leaves from the Field.

This slump was in some degree the result of an attempt to corner the hemp market on the part of a few persons, who did not sufficiently weigh the fact that a product which has carried a great demand during the recent war, owing to large government wartime orders, would naturally slump when hostilities were suspended.

Hemp production in the year 1919 was considerably impeded by severe storms encountered in the hemp growing belt, however, and, without any further attempt to place the blame, we will pass along to the next item of export, after furnishing food for conjecture in the form of the official hemp figures, which are, for 1918: (total valuation) Pesos 116,383,100; and for 1919: Pesos 53,703,052, a decrease of more than 50 per cent.

Coconut oil, the second largest item of Philippine exportation, gained about Pesos 10,000,000 in 1919, the comparative quotations of the last two years being, 1918: Pesos 63,328,317; 1919: Pesos 73,719,504. Practically all of the Philippine oils are exported to the United States.

The exportation of tobacco is a large factor in Philippine commerce and the improvement in the production and marketing of this product has increased in 1919 to a great extent, notwithstanding the unfavorable condition of ultimate markets. Following is a detailed table showing the comparative tobacco figures for the last two years:—

Tobacco.	1919	1918
Cigars	P.18,157,707	P.14,252,637
Cigarettes	P. 391,729	P. 231,941
Leaf Tobacco	P.12,459,210	P. 9,954,955
All other Tobacco ...	P. 381,438	P. 2,730,293
Total Tobacco	P.31,390,084	P.27,169,826

One of the most apparent indications of the industrial growth that is taking place in the Philippine Islands is contained in the figures covering the importation of iron and steel, and the manufactures of iron and steel. The value of the importation of these products in 1918 is Pesos 24,507,970, nearly fifty per cent. less than the 1919 figure, which is Pesos 44,735,174.

The Honolulu Iron Works Company, one of the largest sugar machinery companies in the world, has recently purchased a large tract of land in Manila and has announced the intention of erecting a machine and machine tool factory on the site; this will probably double the iron and steel importations for the coming year.

Fibre Examination

The sugar exports fell off considerably during the year 1919, this product also, as well as hemp, falling victim to shortened prices in the American market. Many of the large sugar exporters held the raw product for a more favorable market, and as a result, the trade figures register a slump where there should have been an improvement. The custom house registration figures are as follow:—

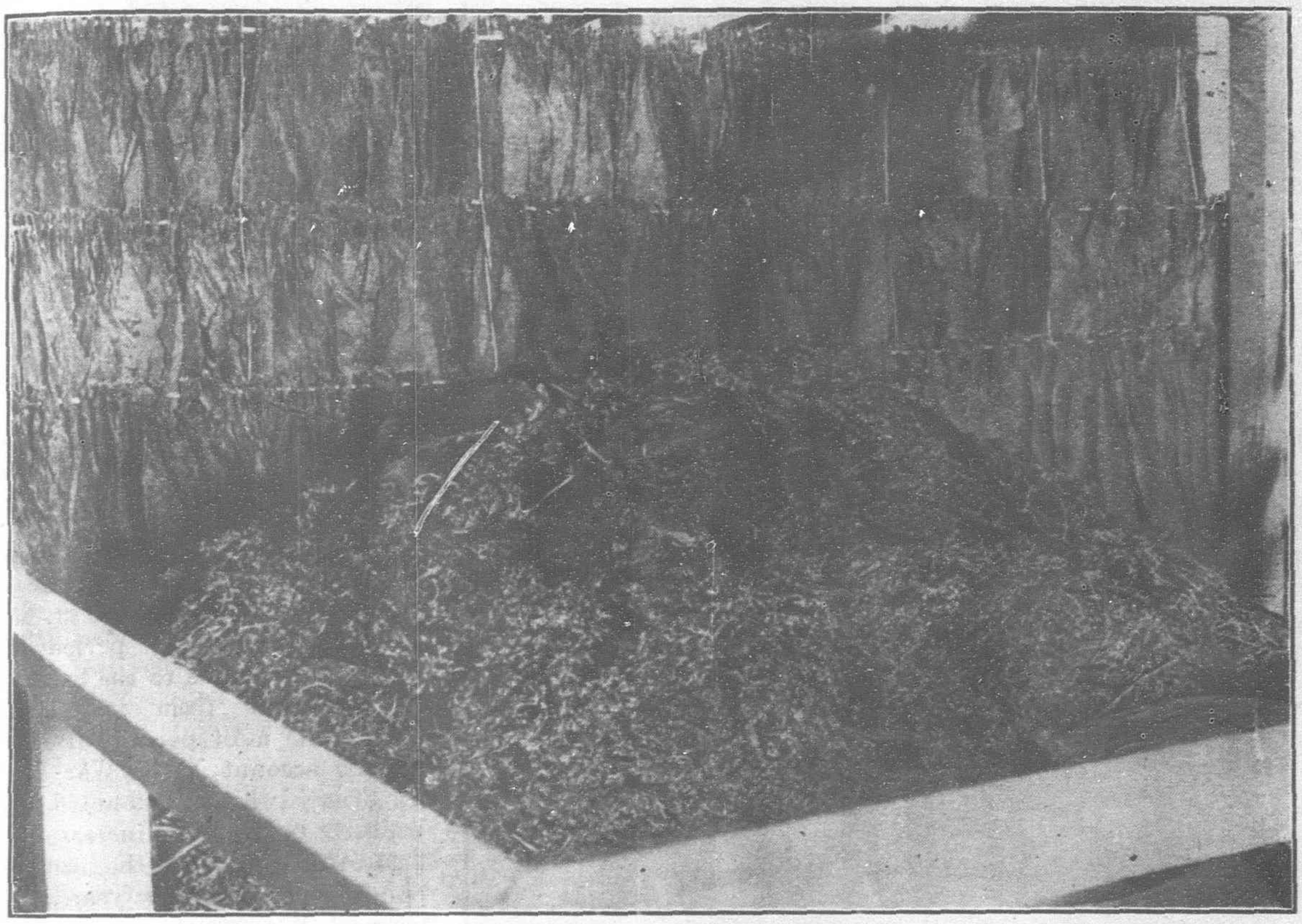
Sugar.	1919
Centrifugal ...	P. 8,218,213
Raw	P.22,182,555
Refined	P. 14,933
Total Sugar ...	P.30,415,701

Sugar.	1918
Centrifugal ...	P.11,578,567
Raw	P.19,850,213
Refined	——
Total Sugar ...	P.31,608,780

Rice, a food product that is consumed more universally in the Islands than any other,

registers a 1919 import valuation of Pesos 8,817,362, as against Pesos 16,433,585 for 1918. The decrease in the importation of this food testifies to the development of the agricultural resources of the Philippines, also the high prices in other countries cut the imports here. It is stated by the Philippine Bureau of Agriculture that within the next five years the rice plantations of the Islands will have developed to the extent of placing rice among the principal items of export as well as feeding the entire Archipelago.

Copra was exported in the year 1919 to the valuation of Pesos 8,839,376 and has also been imported to the amount of Pesos 5,425,560. These figures appear rather paradoxical, but the explanation lies in the fact that the copra mills of the Islands cannot purchase enough of the product locally to keep their mills in operation more than half the year, as the dealers prefer to export the copra to a better market, when the prices elsewhere are extra high. Owing to this condition, the mill operators are compelled to import or close up the mills. If the oil mills here were able to get the total copra production of the Islands, stop exportation of copra entirely, there still wouldn't be enough to keep all mills going regularly.



Native Process of Drying Tobacco.

Sugar Cane in the Philippines.

It has been proposed in the Philippine legislature to allow the importation of peanuts free from duty, in order to work the copra mills in the manufacture of peanut oil during the copra shortage, but no action has been taken by the government in the matter to date.

The importation of cotton cloths has decreased from Pesos 40,933,913 in 1918 to Pesos 23,825,903 in 1919, the merchants being hesitant about buying because they feared that prices might fall before they could dispose of the goods. The hesitancy is no longer perceptible.

Gold ore has not been exported in large quantities principally because the local jewelry firms buy much of the product at the mines and use it in the local market. The following table is a supplemental statement of the gold ore, bullion and Philippine silver coin exported in the calendar year 1919 as compared with the calendar year 1918:—

1919

Articles	Country of Destination	Quantity (ounces)	Value
Gold ore ...	U.S.	—	P. 100,000
Gold bullion	U.S.	66,872	P.1,732,520
Gold bullion	China	3,911	P. 110,633
Silver ore ...	U.S.	—	—
Silver coin .	China	—	—

1918

Gold ore ...	U.S.	—	—
Gold bullion	U.S.	65,918	P.1,873,938
Gold bullion	China	—	—
Silver ore ...	U.S.	—	P. 28,000
Silver coin .	China	—	P.7,500,000

The Philippine embroidery industry furnishes a living for thousands of Filipino women and girls, and may well be ranked among the arts of the Island group; some of the intricate designs worked out by the native experts cannot be equaled in any part of the world. In 1918, the Philippines exported Pesos 4,319,501 in this luxury, as compared with Pesos 6,913,004 in 1919, and the industry is only in its infancy.

The figures given in this article show, in a small way, the industrial condition of the Philippines and explain the

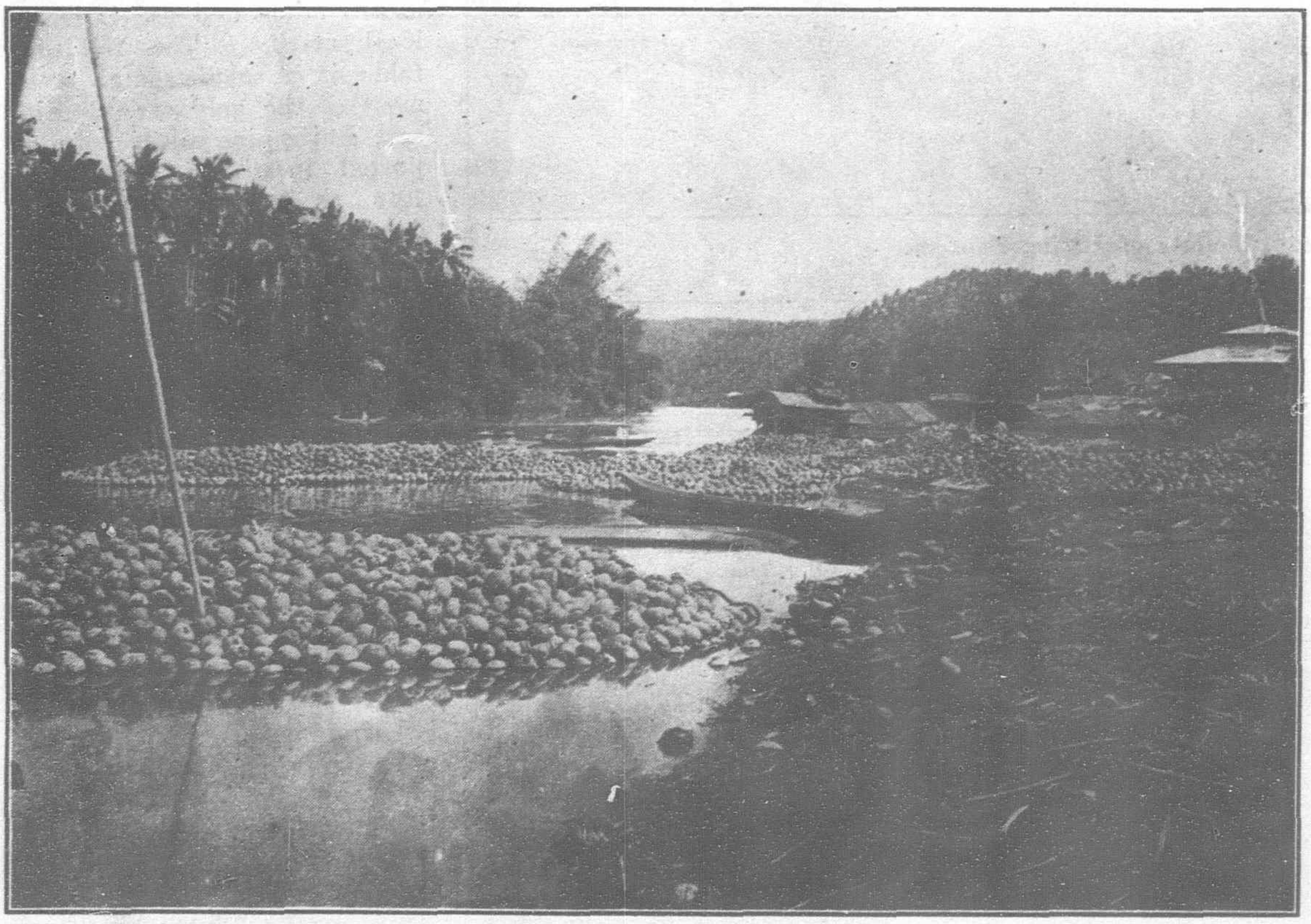
reason for the 1919 balance of trade against the Islands; they also testify to the development of the agricultural resources and to the growth and improvement witnessed in many and various avenues of commerce, regardless of the trade report.

The total value of imports, exports and total trade, by ports of entry are contained in the following tables:—

1919. Ports.	Imports.	Exports.	Total Trade.
Manila	P.214,933,135	P.179,704,986	P.394,638,161
Iloilo	10,284,982	20,353,136	30,638,118
Cebu	9,409,848	24.611,112	34,020,960
Jolo	836,340	680,177	1,516,517
Zamboanga	1,791,958	870,780	2,662,938
Balabac	21,801	15,461	37,262
Total Trade ...	P.237,278,104	P.226,235,652	P.463,513,756

1918. Ports.	Imports.	Exports.	Total Trade.
Manila	P.178,939,906	P.228,818,256	P.407,758,162
Iloilo	4,349,937	16,019,055	20,368,992
Cebu	11,484,577	24,718,359	36,202,936
Jolo	1,057,605	340,512	1,398,117
Zamboanga	1,354,051	483,541	1,837,592
Balabac	12,347	9,241	21,588
Total Trade ...	P.197,198,423	P.270,388,964	P.467,587,387

The markets of the world have now regained some vestige of their pre-war stability, and are clamoring for Philippine products: in the year 1920 thousands of hectares of land will be claimed for agriculture; eight large sugar centrals are under construction; the harbor is being widened and deepened; plans for a free port are being considered by the legislature; the Islands are undoubtedly opening an era of progressive prosperity, and, all these things considered, the statement of a prominent Filipino customs official to the effect that "the Philippines will shatter all previous individual and total import and export figures in the calendar year of 1920" may easily be credited.



Coconut Rafts, Pagsanjan, Laguna.

Philippine Town Wiped out by Flames

Over one-half of the business section of the town of Gaugau. province of Pampanga, was razed to the ground early in March by a conflagration which burned 500 houses, the loss being estimated at more than half-a-million pesos. A strong gale and the utter absence of fire-fighting apparatus, which is to be found in almost every provincial town in the Philippines, made the blaze impossible to check, and the remainder of the town was saved merely because of its location to windward of the flames. This is the largest fire recorded since the great Carnival disaster in Manila.

State Revenues of Japan

Japan's State revenue for the financial year 1919-1920 reached Y.1,288,721,836.21 at the end of February against Y.1,028,884,947.-557 for the corresponding period of last year, the gain only amounting to Y.259,836,888.653.

Of this total, Y.651,826,785.98 was ordinary revenue, which showed a gain of Y.114,421,828.672, the bulk of it coming from the taxes. The total receipt of taxes was Y.437,378,479.526, being an increase of Y.100,284,336.294 as compared with the corresponding period of the last financial year. The biggest item under this head is the Income Tax. The total receipts of the tax amounted to Y.111,605,156.20, an increase of Y.45,231,787.085. The Land registers a decrease of Y.73,779.505 on the other hand, the total having come up to Y.44,605,343.685.

Among other indirect taxes the Consumption Tax on Sugar scores a strikingly big increase apparently on account of the heavy speculative importation of sugar from Java. The total at the end of February was Y.39,007,177.58, an increase of Y.10,977,779.-855 as compared with the corresponding period of last year. It is also to be noted that the taxes paid by Exchanges were doubled. The present receipt is Y.14,719,554, an increase of Y.7,072,410 compared with the corresponding period of last year. This is evidently the result of the gambling booms started in Japan recently. Import duties amount to Y.64,470,882.18, an increase of Y.6,603,141.42 over the corresponding period of last year.

The income from State properties and enterprises shows a very poor increase evidently because of the Monopoly Bureau's profit being not yet transferred to the general revenue accounts. The receipts from the Postal, Telephonic and Telegraphic services amounted to Y.103,049,454, an increase of Y.11,261,805.888.

Extraordinary revenue amounted to Y.636,895,050.23 an increase of Y.145,415,059.381 over the corresponding period of last year. The greater part of this increase is due to the balance brought over from last fiscal year. The most prominent item in this account is the War Profit Tax, which amounted to Y.101,938,080.47, an increase of Y.57,544,382.30 over the corresponding period of last year. The receipt of premium on marine insurance contracts was only Y.714,060,361, being a decrease of Y.27,597,533.

New Anti-Opium Campaign

The "Peking and Tientsin Times" says a Reuter dispatch of April 5, to-day publishes an eight-page anti-opium and anti-morphia supplement. The supplement contains a message from President Hsu Shih-chang to the Anti-Opium Association and special articles by Li Yuan-hung, Sir John Jordan, Mr. S. Jarlin, Sir Francis Aglen, Bishop Norris, M. Picard-Destelan. Dr. Wu Lien-teh, Mr. A. F. Blanco, and Mr. A. Sowerby. Special features are selected articles dealing with the traffic in narcotic drugs, photographs of British, American and Japanese consigned drugs seized in China, together with photos of victims of the drugs. Copies of the supplement are being mailed to the members of the British and American Legislatures and to the leading papers in America, Great Britain, China, India, Australia, Canada and other countries. The world-wide distribution of this supplement gives the best illustration, yet offered, of the world-active measures being undertaken by the anti-drug societies of China and also of the close and ready co-operation of the leading officials in China as well as of leading foreigners and of the press.

Shanghai's Electricity Department

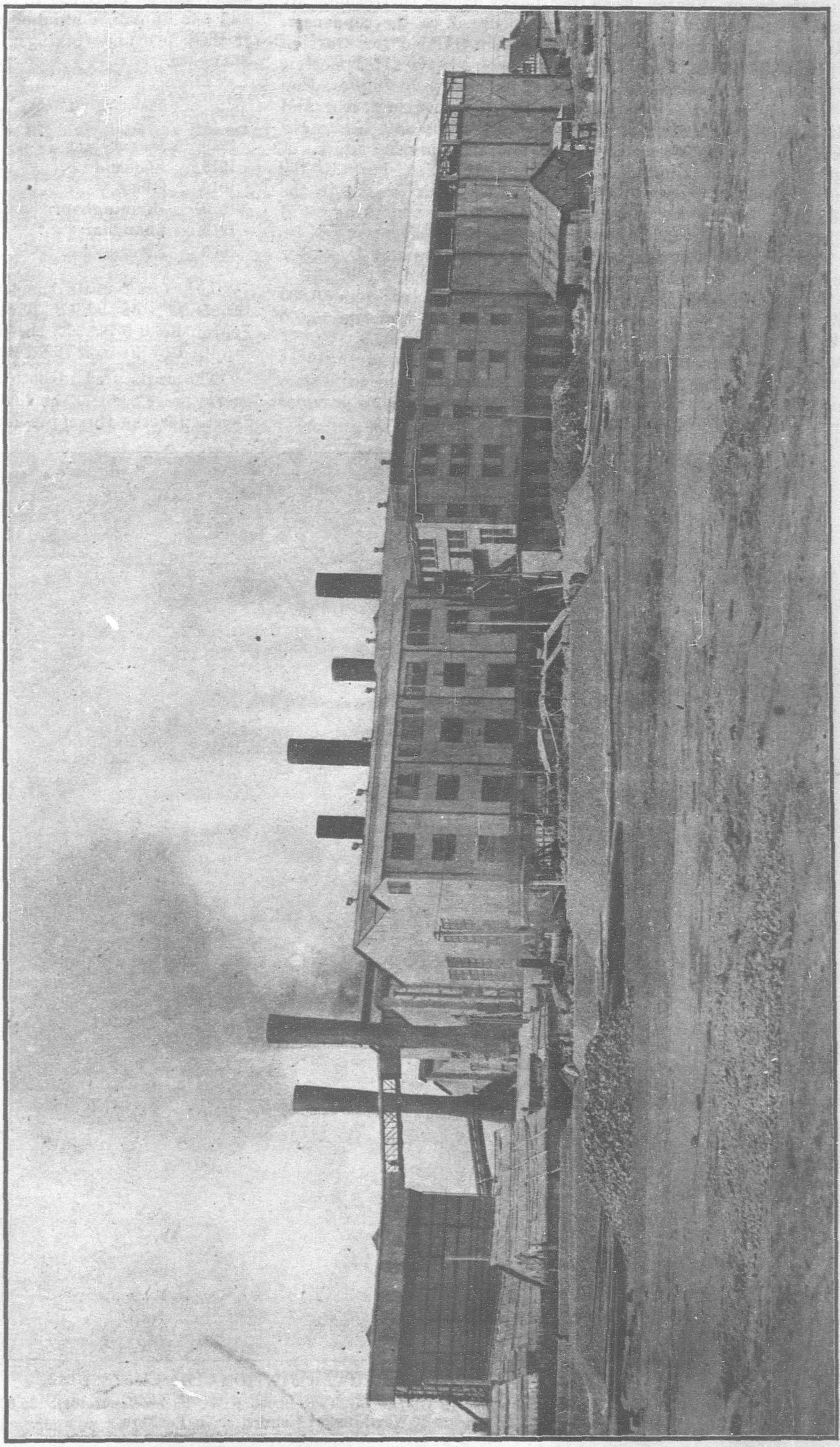
(Annual Report of Engineer-in-Chief and Manager, Mr. T. H. U. Aldridge)

THE year 1919 may be regarded as a satisfactory one for the Electricity Department; its activities were extended on a progressive scale both as regards new construction work and sales of electricity. The Riverside Power Station was still operating without a sufficiency of reserve plant, but the situation was made somewhat easier by the commissioning of the 5,000 K.W. Fraser and Chalmers-Vickers turbo-generator in January, although the two A.E.G. 2,000 K.W. generators were not repaired and put into use until the autumn. The reconstruction of these two generators by the Mitsu Bishi Works at Nagasaki has been quite successful, and as far as can be judged the work has been thoroughly well done. The electrical part of these two machines is now regarded as being superior to what it was originally. Both the 5,000 K.W. A.E.G. generators again broke down badly during the year at a most unfortunate time when another 5,000 K.W. turbo-generator was out of service for overhaul. As a consequence several large power users had to be put on restricted supply for a week or so, with serious inconvenience to them, and loss of prestige and revenue to the department. It is but fair to state that the power users affected met the department in a fair spirit of compromise, realizing the difficulties under which it was laboring.

Owing to the plant shortage, the cost of generation did not fall as low as was anticipated, for the reason that no opportunity was afforded to overhaul the G.E.C. 10,000 K.W. turbine and condensing plant, which prevented the attainment of high vacuum, which is such an important factor in the economical operation of steam turbines. These unsatisfactory operating conditions are reflected in the cost per unit generated not falling as low as it otherwise would. Another contributory cause was the necessity of continuously running the smaller and less efficient turbines whilst the two 5,000 K.W. machines were laid off for repairs; and furthermore, the Fearon Road plant had to be used more than was contemplated at the beginning of the year.

Towards the latter part of the year the erection of the new 10,000 K.W. Parson's turbine, and the first of the two 18,000 K.W. General Electric turbines, was commenced. At the close of the year the erection of the condensers of both units was practically completed.

The 10,000 K.W. generator was transferred from the 6,600 volt



RIVERSIDE POWER STATION
View from East. Separate 22,000 Volt Switch and Transformer House in Centre

switchgear to its bank of step up transformers, and for the first time two trunk cables from Riverside to Fearon Road were operated at a pressure of 22,000 volts. These trunks had previously been in service on the 6,600 volt system. At the Fearon Road station a corresponding bank of transformers was put into service for stepping down the pressure from 22,000 to 6,300 volts for re-distribution on the 6,300 volt feeders radiating from Fearon Road.

A 3,500 K.V.A. Westinghouse synchronous condenser was put into service at Fearon Road for power factor correction. By means of a 600 K.W. dynamo direct coupled to the condenser, additional direct current at 550 volts is available for traction purposes, and also for the direct current service for electric elevators. This machine is the first of its type to be employed on the system, and its success as a power factor improver and additionally as a means of providing direct current, led to the ordering of a duplicate machine from the same manufacturers. A larger synchronous condenser rated at 6,500 K.V.A. built by the General Electric Company was delivered last year for use in the 25,000 K.W. sub-station at Tonquin Road, but this machine could not be used as the sub-station was not completed.

The installed plant capacity of the two stations at December 31 was 38,600 K.W.: Riverside, 33,000; Fearon Road, 5,600.

To the Riverside Power Station is being added: one 10,000 K.W. Parsons and Co. turbo-generator (erecting) and two 18,000 K. W. General Electric Co. turbo-generators (erecting).

The highest maximum load which occurred simultaneously at the two stations was 28,365 K.W. The load delivered to feeders was 27,553 K.W. an increase of 29.83 per cent. over the previous year.

Load Factor

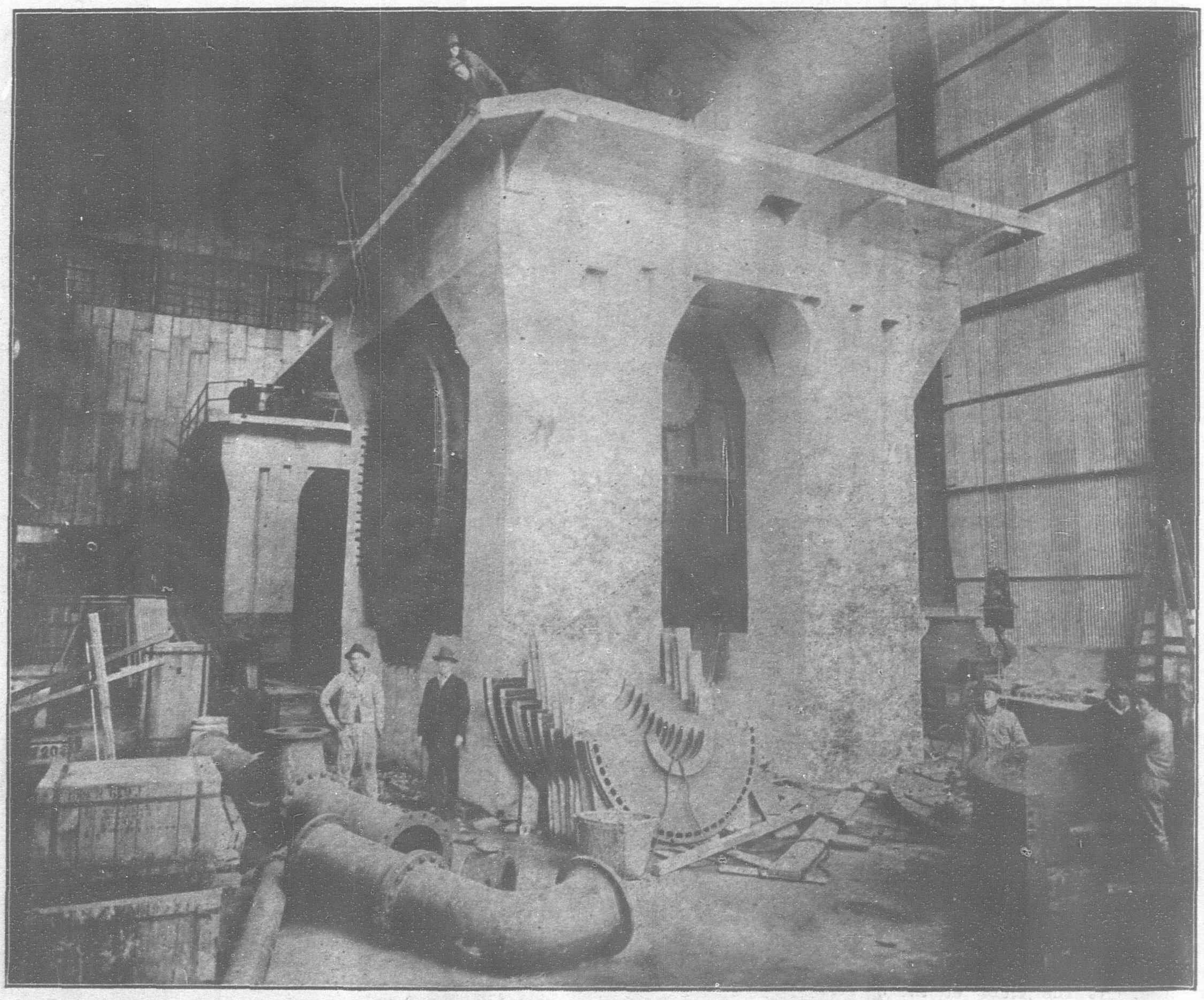
The load factor has dropped slightly, from 44.38 per cent. to 42.39 per cent. The drop is due to a few bulk supply consumers coming on to the system during the last quarter of the year.

Notwithstanding the slight drop, the 42.39 per cent. load factor may be considered extremely good, and it compares more than favorably with the five largest municipally-owned electricity undertakings in Great Britain. The table below shows the units sold per annum, maximum demand in kilowatts, and load factor of these five undertakings, and also similar data relating to Shanghai.

Year Ending	Undertaking	Units Sold per annum	Maximum Demand in K.W.	Load Factor. %
1919	Manchester	184,675,190	65,050	32.41
1919	Sheffield	161,839,041	59,546	31.03
1919	Glasgow	144,930,164	59,168	27.96
1919	Birmingham	140,938,720	53,185	30.25
1919	**Shanghai**	**102,338,137**	**27,553**	42.39
1919	Liverpool	72,623,368	30,000	27.63

The total units generated at both stations amounted to 128,844,547, of which Riverside accounted for 123,058,950 and Fearon Road 5,785,597, the percentage of the total units generated supplied by Fearon Road being 4.49.

The units used in both stations directly in the generation of energy were 9,861,773 or 7.65 per cent. of the total generated. The figures for the three previous years were 8.04 per cent., 6.55 per



RIVERSIDE POWER STATION—1919 EXTENSIONS
View Showing Foundation Blocks for Two 18,000 K.W. Turbo-Generators. 36,000 Square Feet Worthington Condenser in Position

cent. and 6.81 per cent. respectively. 284,666 units were used for miscellaneous purposes such as Fearon Road station lighting, stores, godowns, offices and showrooms, also for office and showroom heating, and energy used by the meter testing department.

Units Sold

The total units sold amounted to 102,338,137, an increase of 18.62 per cent. over 1918.

	1914	1915	1916	1917	1918	1919	Increase
Private Lighting ...	12,325,247	14,073,166	14,285,888	15,206,019	14,444,261	16,378,793	1,934,532
Public Lighting... ...	1,055,272	1,005,259	1,058,772	1,128,896	1,141,973	1,192,650	50,677
Heating and Cooking ...	395,675	679,704	899,585	1,129,754	899,852	952,814	52,962
Power	15,230,639	30,633,455	42,042,853	57,182,340	66,024,895	79,622,548	13,597,653
Traction	3,626,838	3,395,813	3,873,699	3,843,433	3,764,678	4,191,332	426,654
	32,633,671	49,787,397	62,160,796	78,490,442	86,275,659	102,338,137	16,062,478

The nett sales of electricity for all purposes has increased from 86,275,659 units in 1918 to 102,338,137 or 18.6 per cent. Lighting shows a very satisfactory recovery, for whereas in 1918 there was a reduction on the previous year of 761,758 units, there was a substantial increase of 1,934,532 last year above the 1918 sales.

The power units sold have risen from 66,024,895 in 1918 to 79,622,548 last year, an increase of 13,597,653 or 20.9 per cent.

Traction supply increased from 3,764,678 to 4,191,332 units, an increase of 426,654 units or 11.3 per cent.

There was a net increase, after allowing for disconnections, of 2,870 new service connections made to the mains during the year, bringing the total services to 27,903 at the end of December.

The equivalent of 103,781 additional 30-watt lamps were added which brings the total up to 844,391. These figures include lamps, radiators, cookers and small domestic electrical appliances. They do not, however, include either motors or street lamps. The street lamp additions and new motors connected will be found respectively in the distribution and power sections of this report.

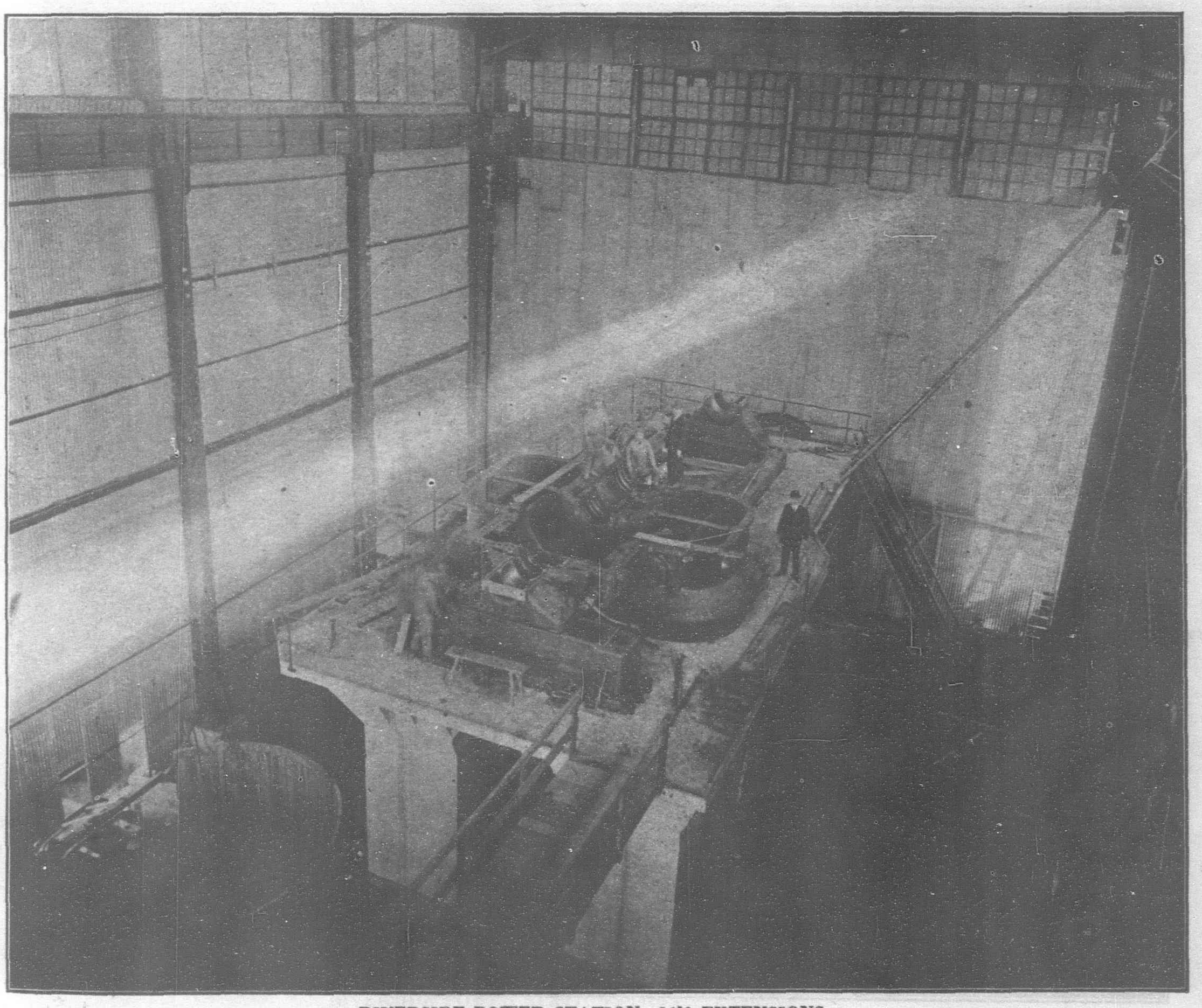
During the year 108.75 miles of overhead cable were erected for extending and enlarging the overhead mains. 16.56 miles of extra high tension underground mains, 1.56 miles of low tension, and .54 miles of pilot cable were laid.

Underground Mains

The 22,000 volt cables between Fearon Road station and Tonquin Road sub-station were completely laid and jointed between the months of July and December (inclusive), thus giving a very urgently needed relief to the older cables in this district. This job alone involved the handling of five hundred and fifteen tons of cable.

Three of the original 22,000 volt trunks between Riverside and Fearon Road which previous to this had been worked at 6,600 volts were changed over to 22,000 volts working pressure, the necessary permanent end boxes, etc., being erected at the same time. A start has been made on the laying of two more 22,000 volt cables between Fearon Road and Tonquin Road but only about one mile of this cable was delivered to date.

During the early part of the year a large amount of work was done at Riverside power station in connecting up the 1916 auxiliary switch-board to the various pump, fan, stoker and conveyor motors, all of which work was done with three core, lead covered, and armored cables.



RIVERSIDE POWER STATION—1919 EXTENSIONS
View Showing G.E.C. 18,000 K.W. Turbo-Generator in Course of Erection

In connection with the erection of the two Willans machines in the extension behind the boiler house, eight cables were laid and jointed for the purpose of connecting them to the old board.

The permanent 6,600 volt machine cables were also put in for generators Nos. 5 and 6.

Summary of Underground and Overhead Cable Work

E.H.T.	22,000 volt underground mains extended					... 12.68	miles.
,,	6,600 ,,	,,	,,	,,		... 3.88	,,
,,	Overhead Feeders extended			...	...	... 15.17	,,
,,	,,	,,	enlarged	...	...	... 1.74	,,
H.T.	,,	,,	extended	...	...	... 1.20	,,
,,	,,	,,	enlarged	...	...	... 0.86	,,
L.T.	Underground mains extended			...	...	... 1.56	,,
,,	,,	Pilot cable extended		...	...	... 0.54	,,
,,	Overhead mains extended			...	...	... 42.67	,,
,,	,,	,,	enlarged	...	...	... 28.30	,,
,,	Mains in alleyways extended			...	...	... 5.24	,,
P.L.	Mains extended ...	...	...	...	...	... 8.07	,,
,,	,, enlarged ...	...	...	...	...	... 1.53	,,
Private Road Lighting Mains extended ...						... 3.60	,,
,,	,,	,,	,, enlarged ...			... 0.37	,,

Poles in Roads—New ...	...	631
,, ,, Renewed	...	1,023
,, in Alleyways—New	...	254
,, ,, Renewed	...	12

Public Lighting

It is satisfactory to note that not only were more lamps connected during the past year, than in 1918, but also the candle-power of the lamps connected shows, lamp for lamp, a considerable increase over the previous year.

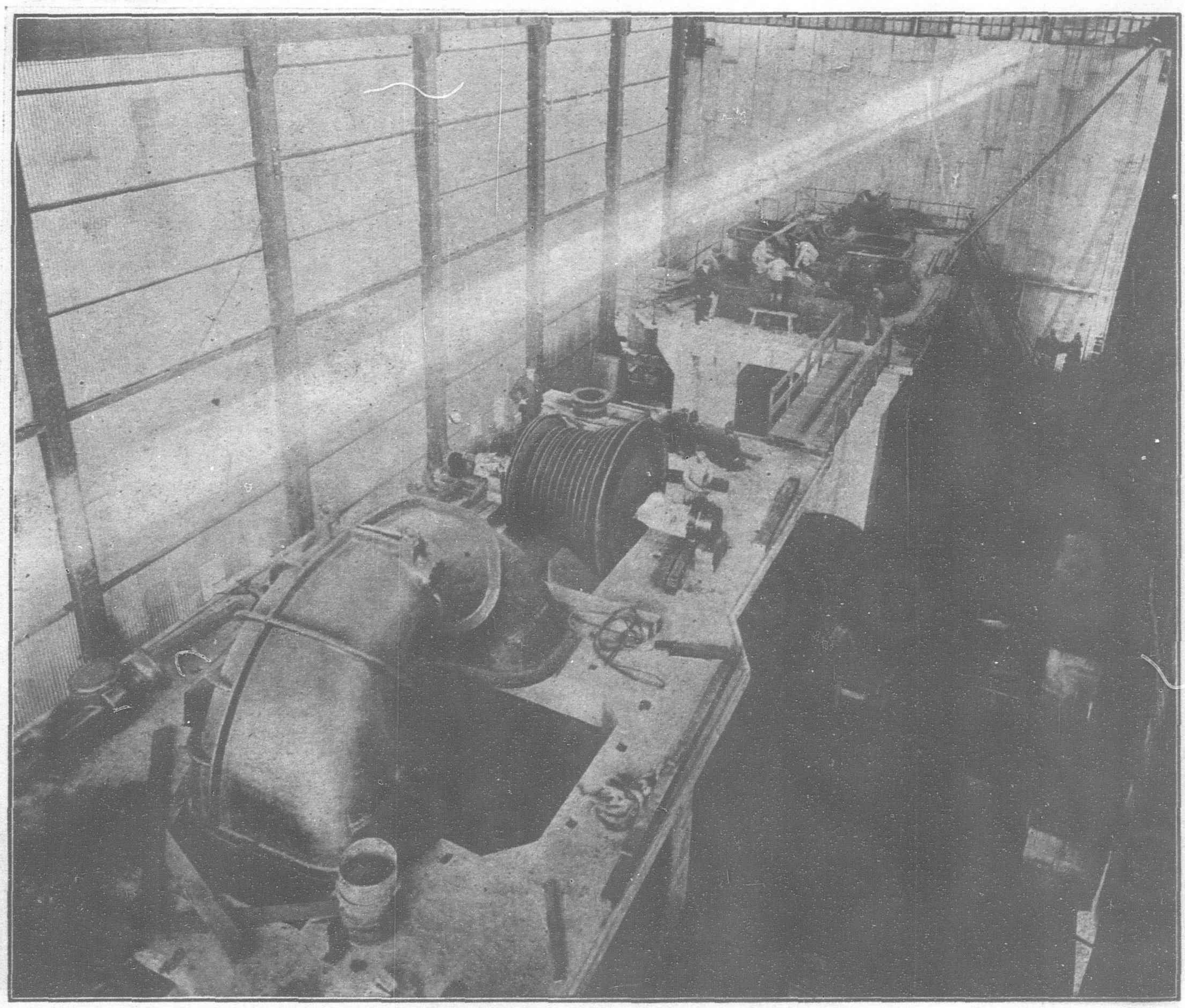
The present lighting of the more important roads generally leaves much to be desired. In this connection, Nanking Road is particularly noticeable for its inadequate lighting. It is anticipated that within the next two months this road will have been re-lit with an intensity of illumination not inferior to that obtaining in busy thoroughfares of other large cities.

During the year, in addition to the usual additions to the public lighting, the following roads were re-lit with lamps of increased candle-power:—Great Western Road, between Seymour and Chungking Roads; Bubbling Well Road, between Siccawei Road and Ferry Road; Yangtszepoo Road, from Lay Road to the Tramway Company's Terminus. At the same time a re-arrangement of certain circuits was made with the result that the above roads are now supplied by two, and in some cases three, separate circuits.

In the Northern District a general re-arrangement of many of the existing circuits was made, and at the same time a new circuit (T), was formed out of parts of the old circuits. This new circuit was put into commission early in the year.

As a result of these alterations the principal roads of the Northern District (Woosung, Range, Haining, North Chekiang, and North Soochow Roads) are at present supplied by at least two separate circuits, the lamps being arranged alternately on each circuit.

Transformers.—During the year the five double-circuit transformers were replaced by ten single-circuit transformers and series regulators. An improvement in the life of the lamps connected



RIVERSIDE POWER STATION—1919 EXTENSIONS

View Showing G.E.C. 18,000 K.W. Turbo-Generator in Course of Erection, also Foundation Block of Second 18,000 K.W. set.

to these ten transformers, due to the closer regulation of the single circuit series regulators, is already noticeable.

Street lamps connected at the end of the year numbered 1,925. The fines incurred during the year for unlighted lamps amounted to Tls. 1,076, which is a decrease of 53 per cent. on the fines incurred during the previous year.

The increase in lamps connected during the year cannot be considered satisfactory in view of the amount of building and the development of property which has been, and is now, taking place. With a few exceptions, property owners are slow to realize the advantages of well lit private roads and alleyways. It is apparently not realized that outside lighting can be installed and maintained by the department at inclusive rates the same as those charged for the lighting of the public roads.

An objection has been made to having electric lamps in private roads because of the glare. This is a matter which can be easily adjusted by carefully choosing suitable positions for the lamps with due regard to the windows of adjacent houses. Also, it is a simple matter to fit a side-shade to a lamp without cutting off an undue amount of light.

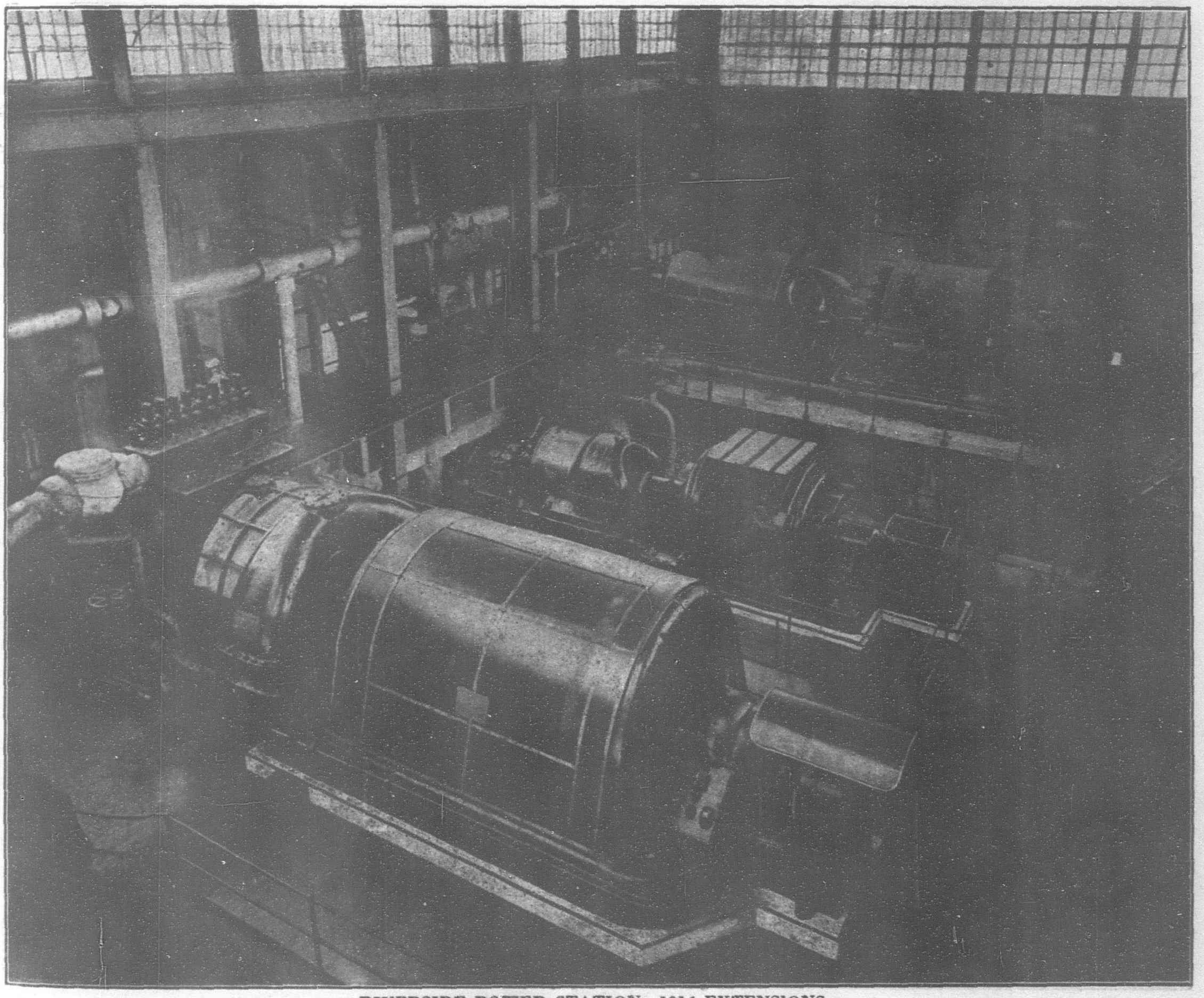
Flood lighting of the exterior of buildings with sources concealed at a distance is a development which may reasonably be expected in the near future in view of the number of new buildings about to be erected. Already two flood lighting installations are in operation here, one for lighting the exterior of a restaurant in Nanking Road, the other for enabling a building contractor to carry on work at night.

Transformer Sub-Stations

		Number	*Capacity in K.W.*
Transformers installed during the year	...	36	20,570.0
,, disconnected during the year		27	4,457.5
Nett increase for year	...	9	16,117.5
Sub-stations Commissioned	... ...	10	
,, Dismantled	... ...	3	
Nett increase for year	...	7	
Pole Transformer stations erected	... ...	2	
,, ,, ,, dismantled	...	5	
Nett decrease for year	...	3	

Grand totals at end of 1919:—

Sub-stations	73
Pole transformers Sub-stations... ...	11
Transformers in Sub-stations	123
Capacity of Transformers...	50,355 K.W.



RIVERSIDE POWER STATION—1916 EXTENSIONS

View Looking North Showing G.F.C. 10,000 K.W., Fraser and Chalmers-Vickers 5,000 K.W. Sets in Operation, and Parsons 10,000 K.W. Set Nearing Completion

The following sub-stations and transformer houses have been commissioned during the year:—

Post Office	Va Woo Zung	Waterworks
Zeng Foong	Foh Shing No. 4	Kiaochow Road
Chungking Road	Dent Road	Whashing Road
	Pao Cheng Mill.	

House Service Connections

Services connected	5,107
,, disconnected	479
Nett increase for year ...	4,628

Power—Industrial Supply

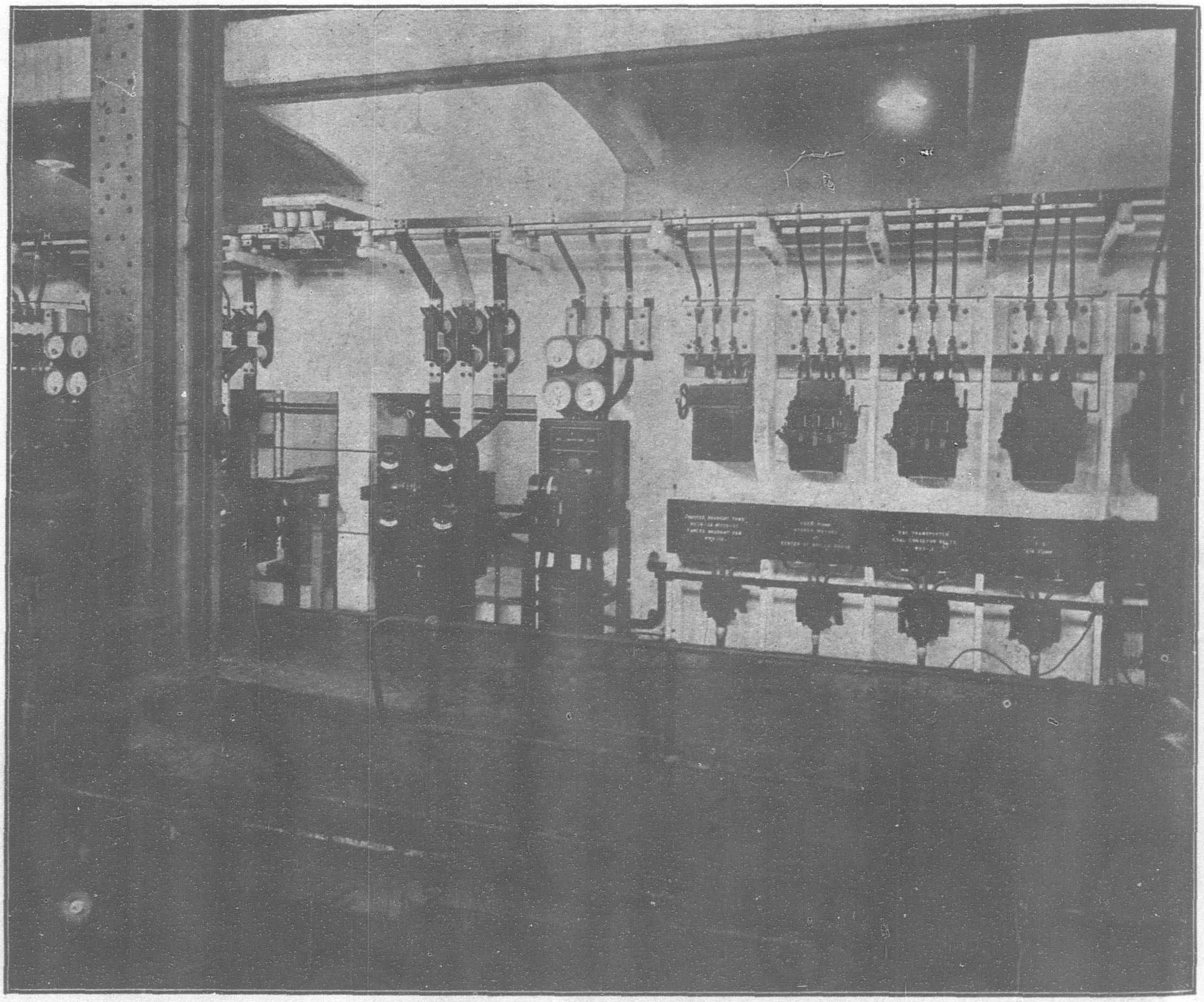
The year's working has been identified with an ever increasing demand upon the part of the smaller power consumers. This will be apparent from the large increase in the total horse-power of motors connected compared with the relatively small number of large power consumers connected during the period under notice. Amongst the latter may be mentioned: Nagai Wata Kaisha's Nos. 7 and 8 Cotton Mills, Foh Shing No. 4 Flour Mill (extensions), Foh Shing No. 6 Flour Mill, Zang Foong Flour Mill (extensions) and Shanghai Waterworks Co. (extensions). A large number of mills and factories are, however, now being built, and their electrification is expected during the current year.

The following is a summary of the year's progress so far as the installation of motors is concerned:

	Number.	*Horse-power.*
Hired Motors connected during 1919...	94	1,332.2
Consumer's Motors connected during 1919	210	3,806.41
Lift and Direct Current motors connected during 1919	10	117.05
Total for year ...	314	5,255.66
Total Hired Motors connected to December, 1919...	824	14,289.85
,, Consumer's Motors connected to Dec., 1919	1,149	17,722.05
,, Lift and Direct Current motors connected to December, 1919	120	1,050.35
Aggregate Total (December, 1919) ...	2,093	33,062.25

The above results represent an increase of 17.7 per cent. in the number of motors and an increase of 19 per cent. in the horse-power connected during the year.

The outstanding feature of the year is the intensive industrial activity which followed immediately upon the cessation of the war. The benefit accruing to this department as an outcome of this



RIVERSIDE POWER STATION—1916 EXTENSIONS
Part View of 350 Volt Switchgear Controlling Station Auxiliaries

state of activity will not be felt in full measure for some time, but it is noteworthy that the number of units sold to cotton and flour milling undertakings during the year have increased by 18.18 per cent. and 21.51 per cent. respectively.

It is of interest to note that the increase in the horse-power of *hired motors* during 1919 is appreciably smaller than that recorded during the previous year. Upon the other hand, the horse-power of motors owned by *consumers* has been greatly increased. thus indicating the existence of a state of confidence in electrical driving which justifies the expenditure of capital by the *consumer*.

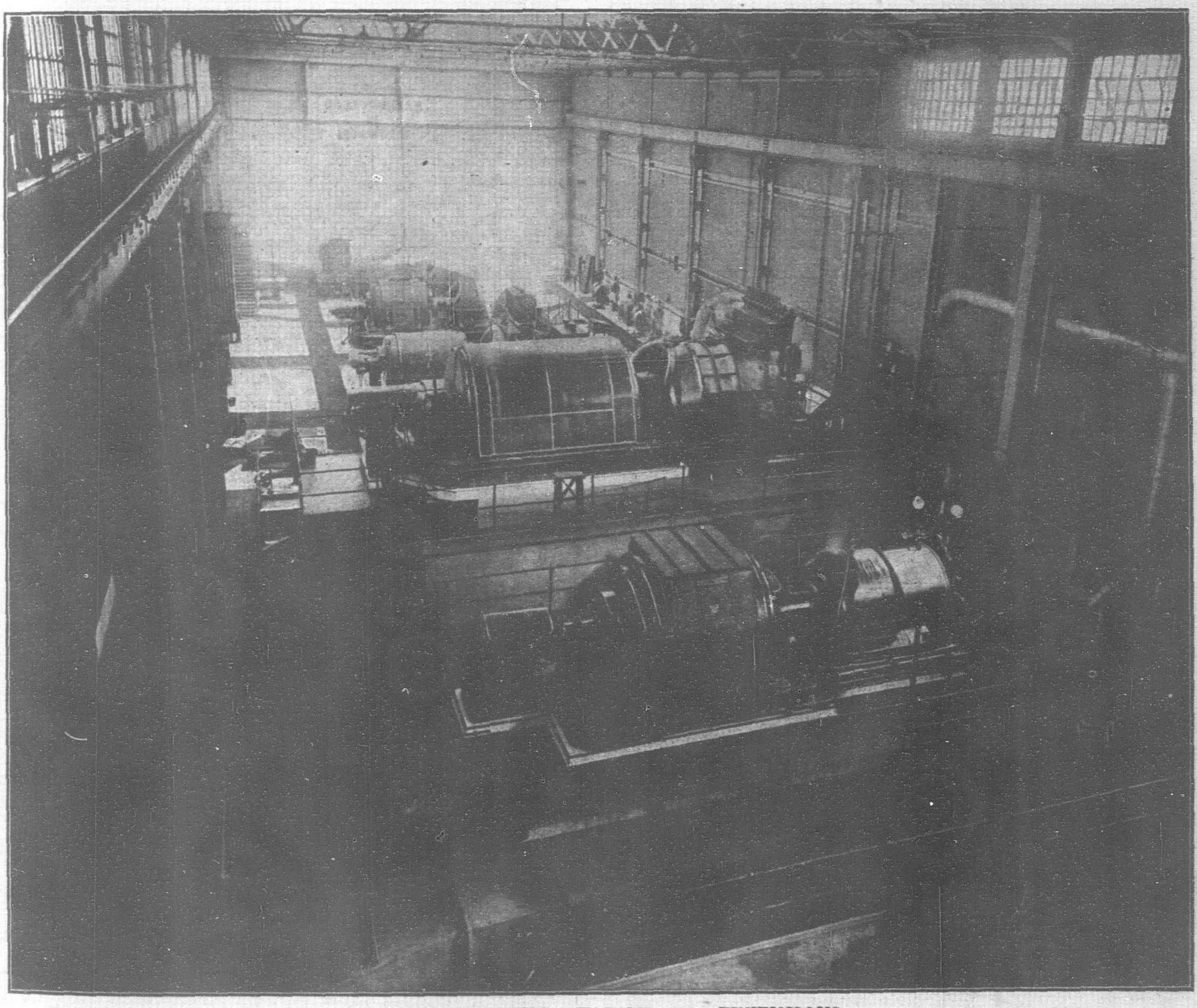
The department's provision of motor-hiring facilities has done much to foster this state of confidence and is still available for those undertakings which are without the means for providing their own driving plant or which are desirous of embarking upon industrial propositions which, for the moment. do not justify heavy capital expenditure. The existence of such facilities has undoubtedly done much to assist in the inception of what are now flourishing concerns.

Many industrial undertakings alike with this department, have been seriously embarrassed during the past year owing to shortage of motor stocks. There are many local concerns awaiting deliveries of motors which are unable to put their plants into commission. The department has been able to relieve the situation to some extent by placing its stock of motors at the disposal of consumers and, by this means, two large cotton mills have been able to place their plants in operation and thus avoid the delay which would otherwise have been associated with the non-delivery of their own motors.

The following schedule will be of interest in that it shows the power required for the operation of Shanghai's leading industries:

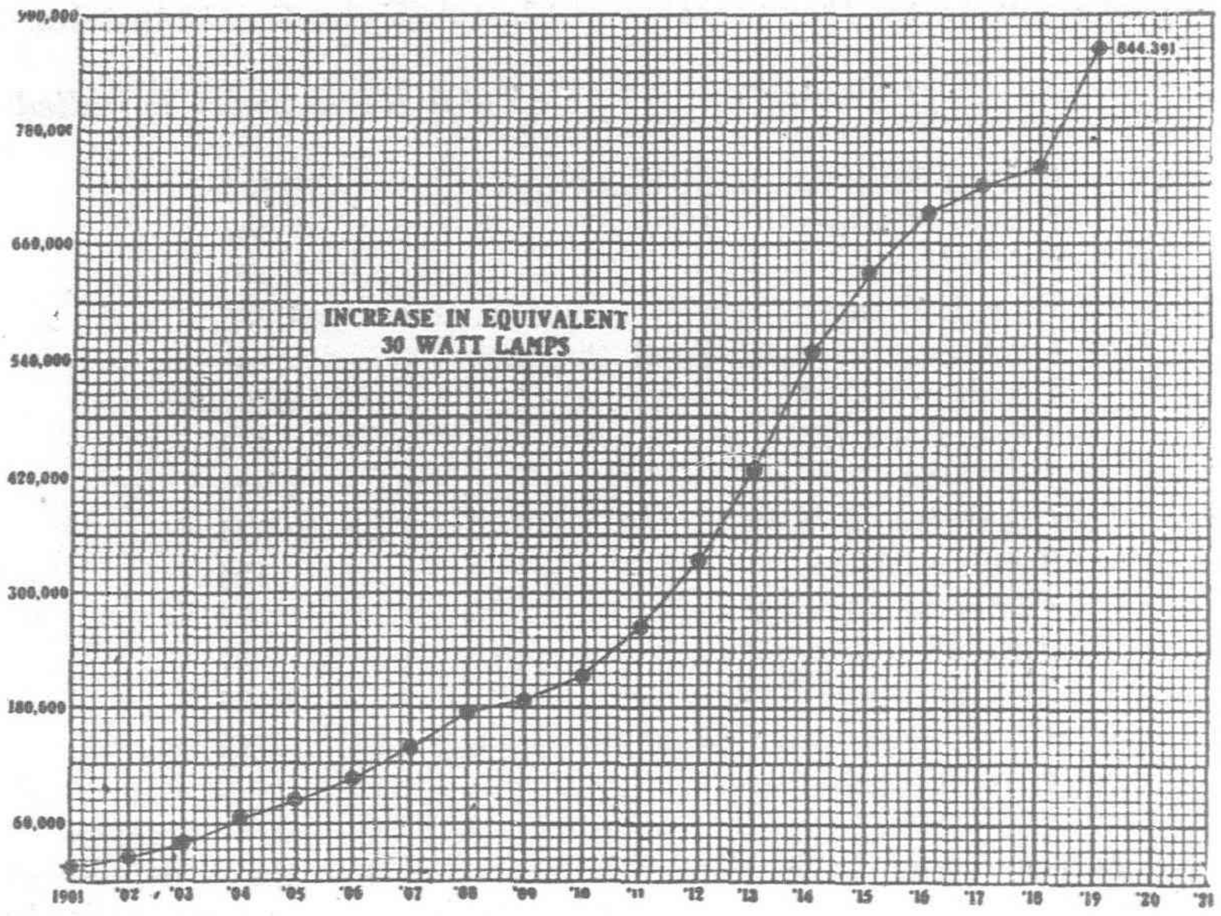
Industry.	*Total Horse-power Installed*
Cotton Spinning and Weaving	18,800
Flour Milling	3,300
Oil Milling	1,570
Rice Hulling	1,235
Cold Storage and Food Products ...	748
Lumber Milling	1,507
Press Packing	444
Printing	1,230
Cigarette Making	334
Tea Polishing	154
Concrete Mixing	552
Jute Weaving	335
Engineering Workshops	1,438
Cinematograph Operation	161
Silk Manufacture	212

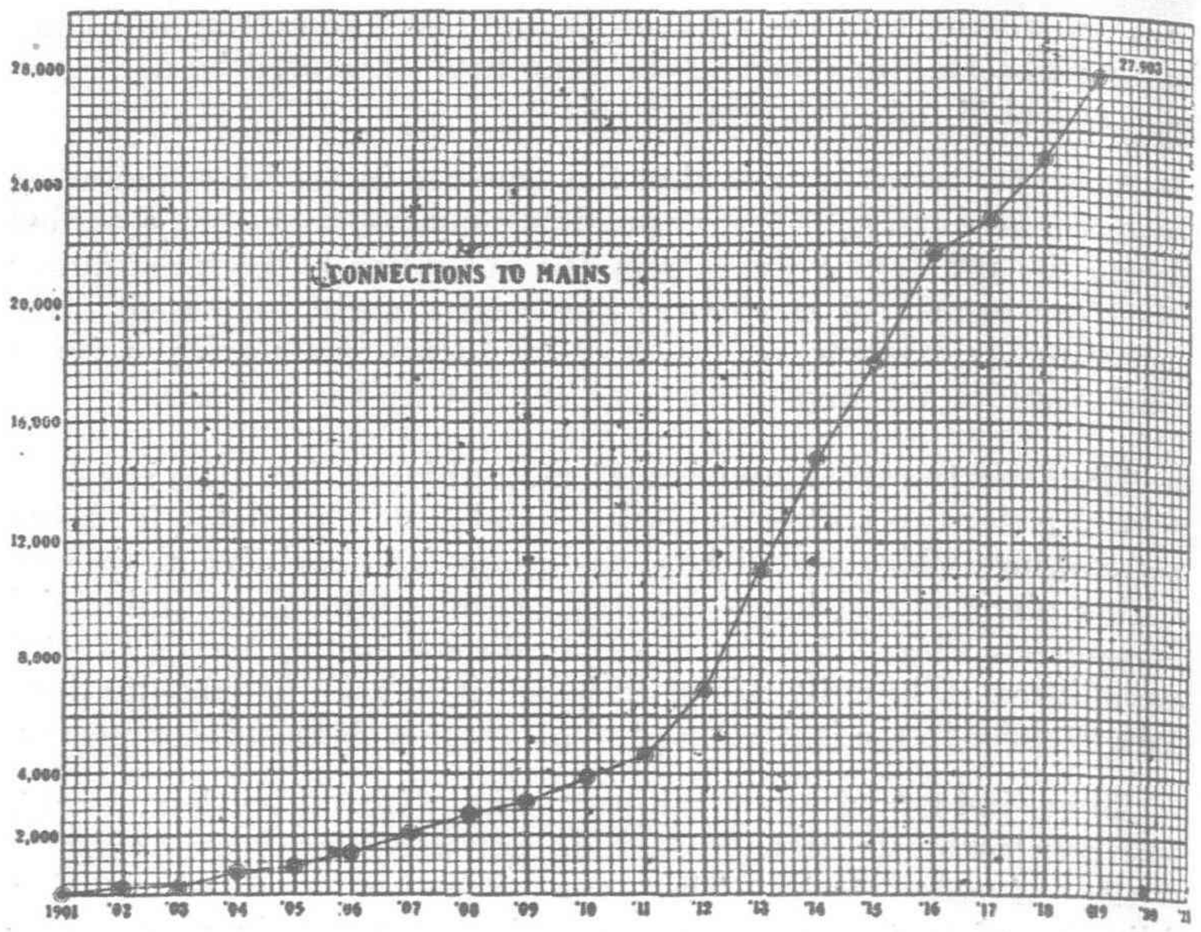
It now seems to be generally accepted that the prospects of Shanghai becoming an important industrial centre are exceedingly encouraging. To a very great extent this development will depend upon the continued availability of cheap electric power. If the natural development of power supply is retarded, there is a probability of new industries locating in other parts of China to the detriment of Shanghai. The continuance of a comprehensive power supply will enlarge the scope of industry and reduce its limitations.

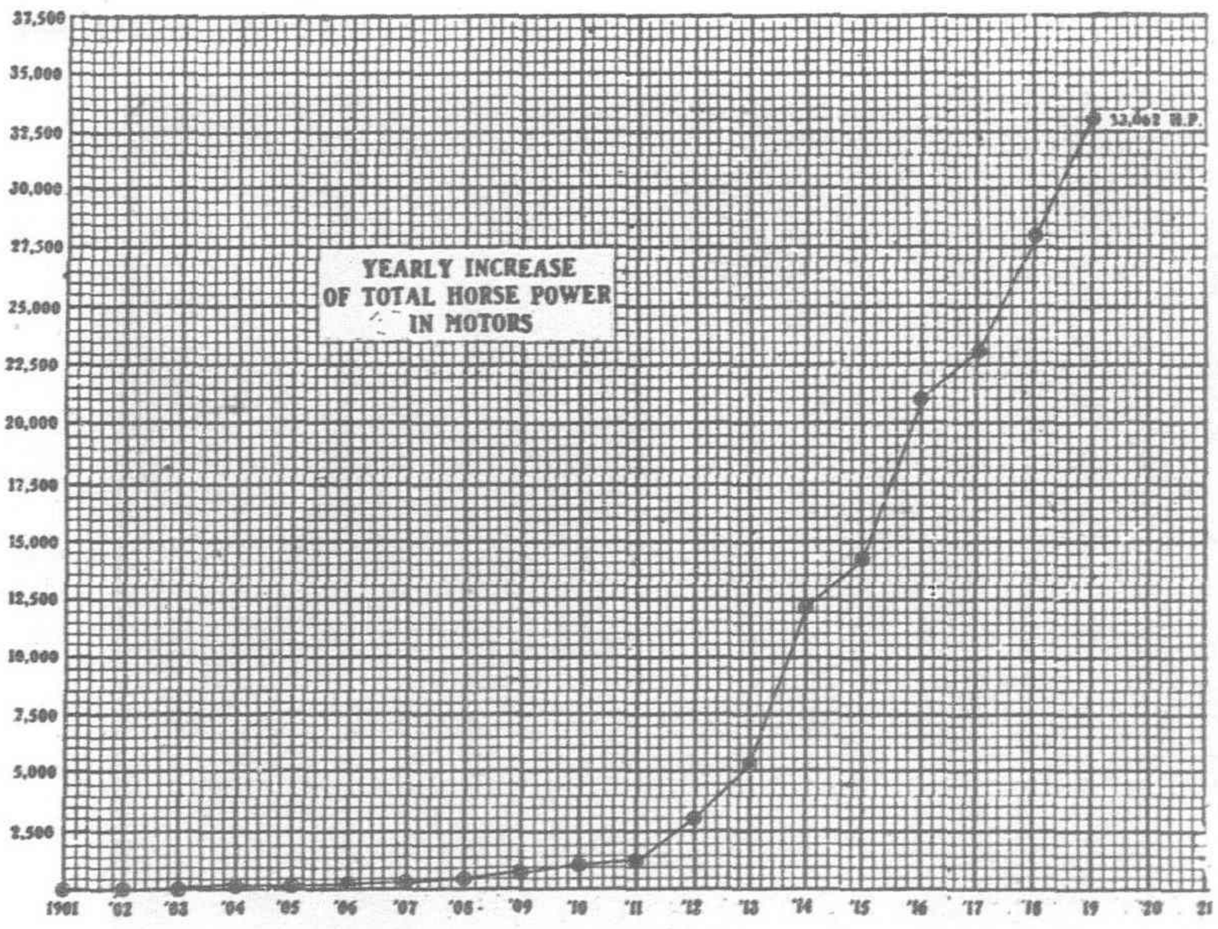


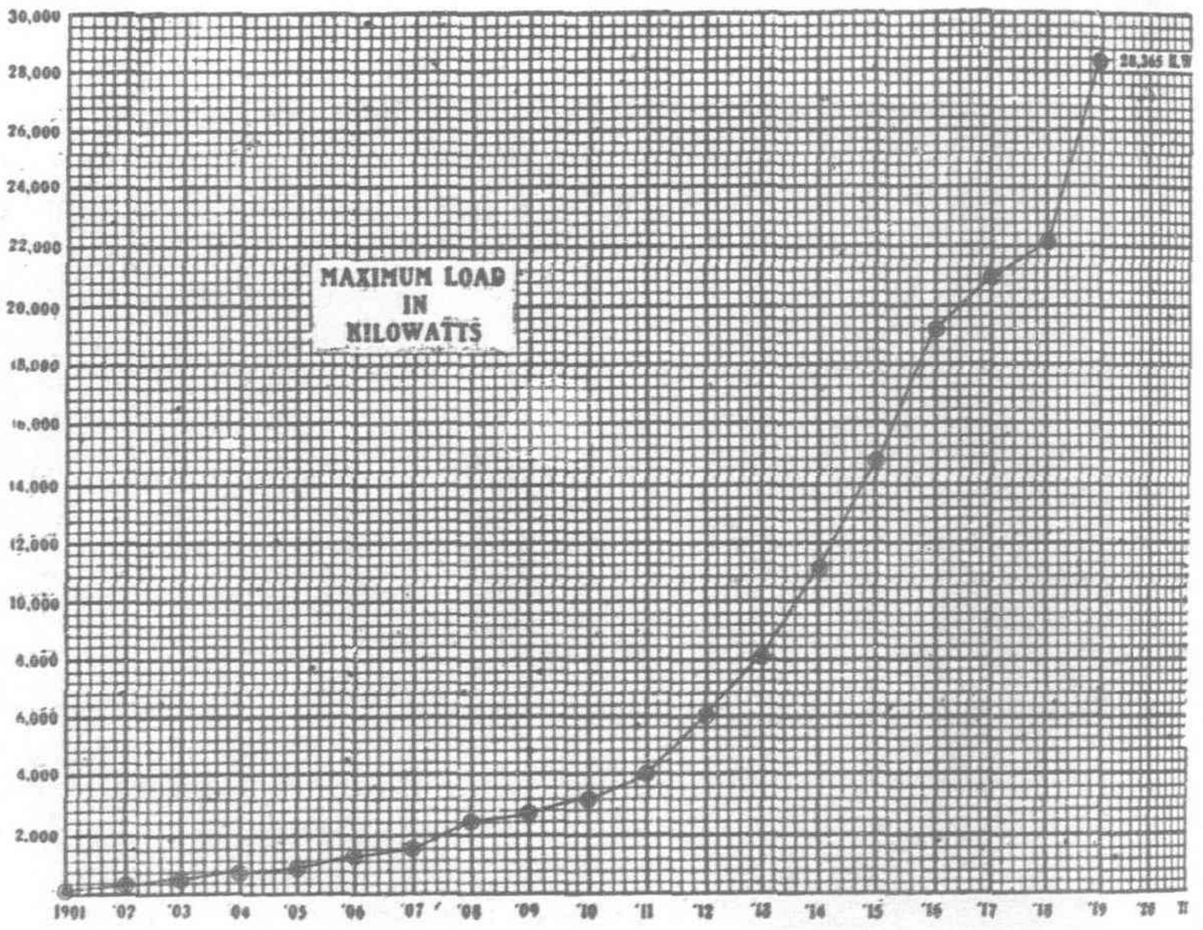
RIVERSIDE POWER STATION—1916 EXTENSIONS

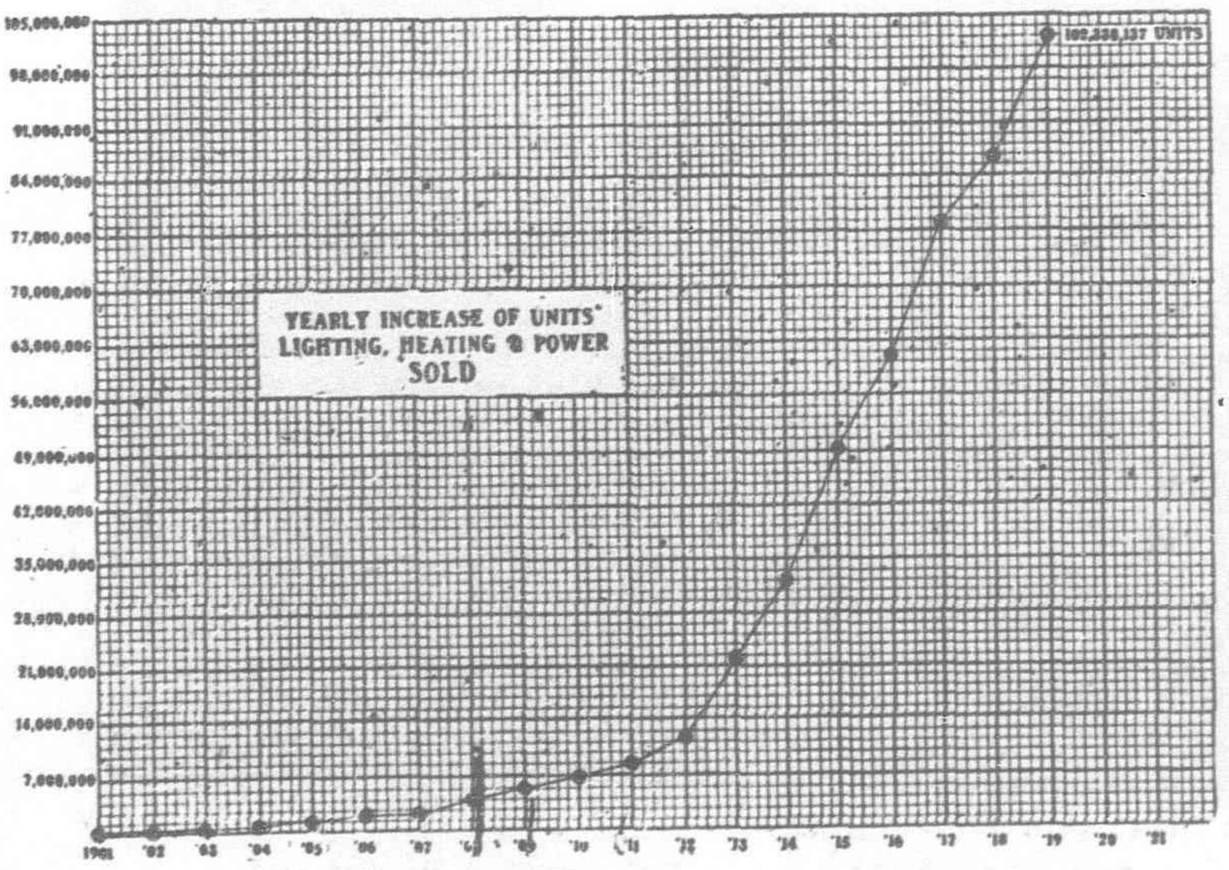
Turbine Room Looking South. Shows Fraser and Chalmers-Vickers 5,000 K.W. Set, G.E.C. 10,000 K.W. Set and two 5,000, two 2,000 Sets in Distance

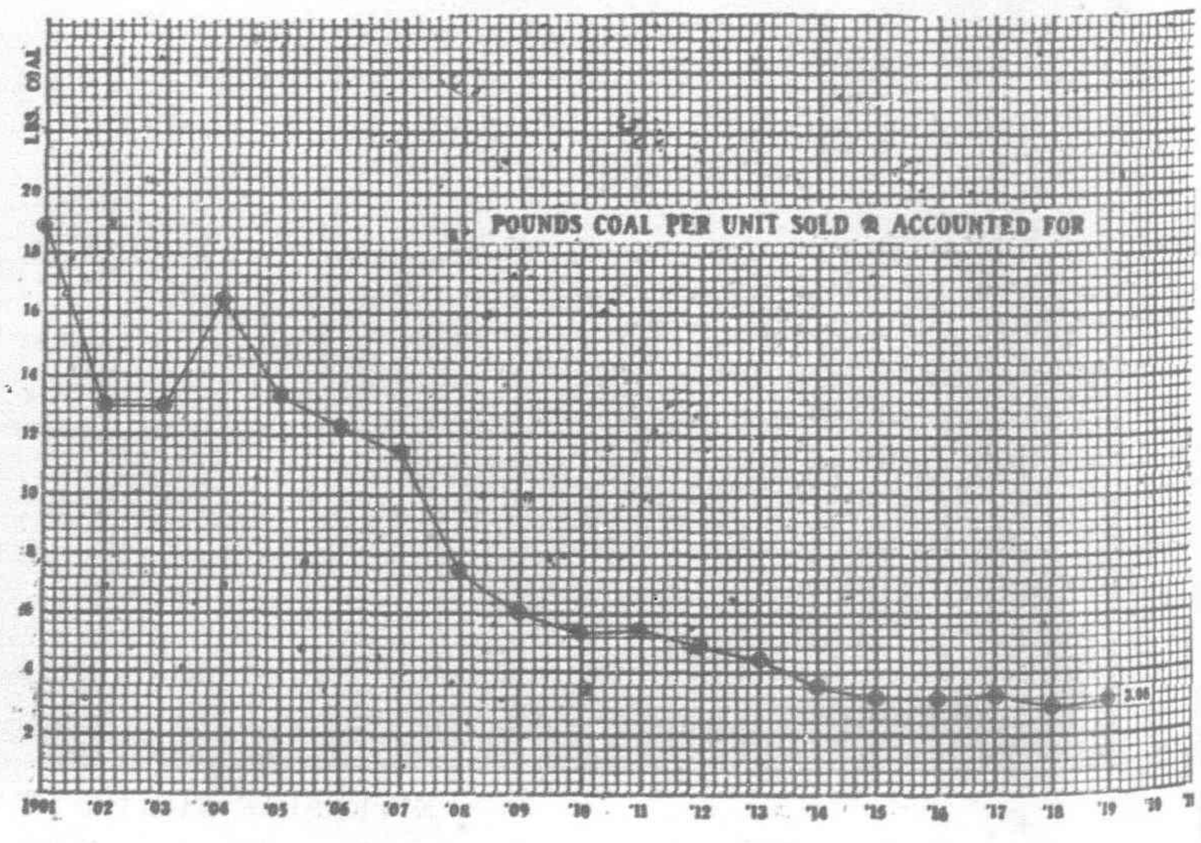

INCREASE IN EQUIVALENT
30 WATT LAMPS
844,391


CONNECTIONS TO MAINS
77,983


YEARLY INCREASE
OF TOTAL HORSE POWER
IN MOTORS
32,062 H.P.

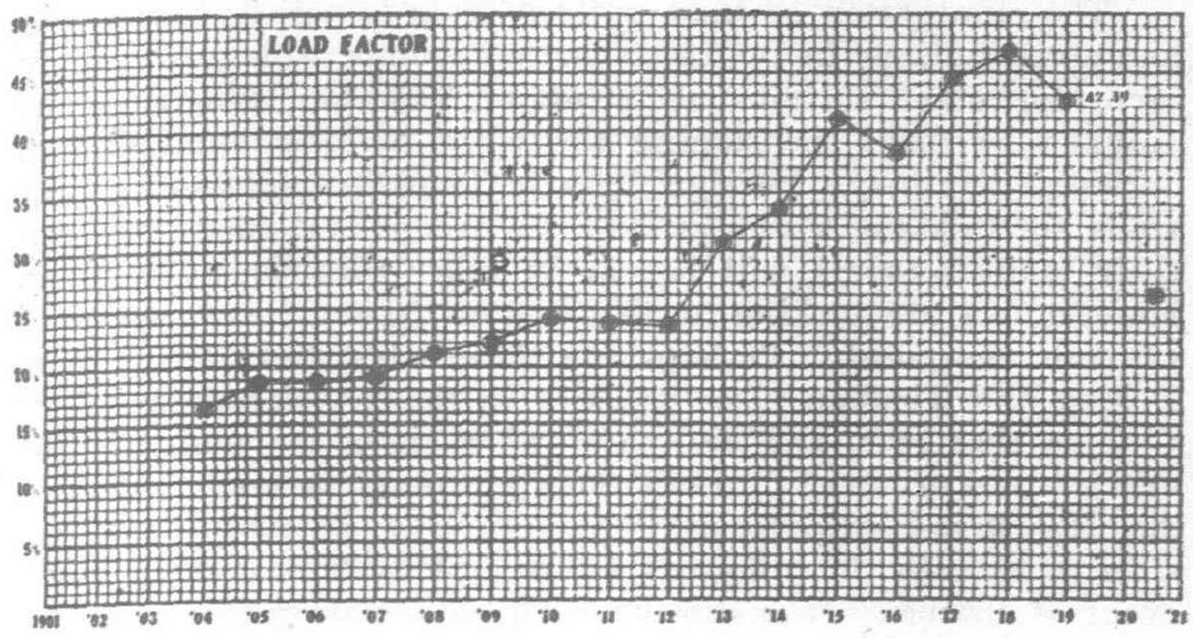

MAXIMUM LOAD
IN
KILOWATTS
28,365 K.W


YEARLY INCREASE OF UNITS
LIGHTING, HEATING & POWER
SOLD
100,338,137 UNITS


POUNDS COAL PER UNIT SOLD & ACCOUNTED FOR
LBS. COAL
3.06

It may further be attended by economic and social effects benefiting employers and employed alike.

Power is the basis of industrial civilization. Industrial development and standards of living are closely dependent upon the *per capita* use of power. The report of the British Reconstruction Committee, which attracted such wide attention last year, presents a most interesting series of statistics showing that the average net output of workers increases consistently and almost directly as the power use *per capita*. The report presents the following conclusion, very pertinent to any consideration of our own plans for the future.



"It is scarcely possible to exaggerate the national importance of a technically sound system of electrical supply, because it is essentially one with the problem of the industrial development of the country, which largely depends upon increasing the net output per head of workers. In the U. S. A. the use of power, where it can be used, is nearly double what it is here. On the other hand, not only are the standard rates of wages higher in the U.S.A., but living conditions are better. There is little doubt that in the U.S.A. the average purchasing power of the individual is above what it is here, and that this is largely due to the more extensive use of power which increases the individual's earning capacity. The best cure for low wages is more motive power. Or, from the manufacturer's point of view, the only offset against the increasing cost of labor is the more extensive use of motive power. The solution of the workman's problem, and also that of his employer, is the same, viz.: greatest possible use of power."

Heating and Cooking

Bearing in mind the continuance of the relatively high rates for heating and cooking supply which have prevailed during the past year, it is a matter for both surprise and congratulation that the amount of energy sold for these purposes has actually increased over that sold during the previous year.

A further satisfactory feature is associated with the fact that the demand for heating and cooking apparatus created by the Chinese consumers is steadily and rapidly increasing, as will be evidenced by records which show 548 Foreign and 344 Chinese heating consumers at the end of the year under review.

The demand for hired heating and cooking apparatus has been such as to completely exhaust available stocks of radiators, which were thought to be ample. Suitable steps are being taken to avoid future shortage. A new showroom is about to be opened in a central position and this will be utilized to the best advantage for the purpose of bringing the various applications of electricity, particularly heating and cooking, to general notice.

Now that the resumption of more normal coal prices has allowed the department to effect substantial reductions in the price of energy, a very considerable increase in the demand for heating and cooking supply may be confidently anticipated.

The following figures will serve to indicate the progress of this important section of the department:—

Number of Hired Radiators in Service	...	...	1,672
" " Cookers	"	... ...	79

"Get-Rich-Quick" Coal Men

In the Annual Report for 1918 attention was invited to the coal resources of China, and the fact was deplored that relatively so little had been accomplished by Chinese mining interests to develop the country's coal resources on a scientifically commercial basis. It is gratifying to observe that latterly there has appeared more activity in the Chinese coal market, and more varieties of native coal are now appearing in Shanghai. On the other hand the prices asked for these coals are yet far too high to make them attractive enough to purchase in bulk quantities; moreover, with a few exceptions, the risk of not securing regular deliveries is too great to justify the placing of contracts for the amount of coal required yearly by the department. Nevertheless, the signs of the times are perhaps more encouraging than they were twelve months ago, and the hope may be expressed that the get-rich-quick obsession of those Chinese having concessions for coal fields may give place to a sounder commercial spirit, and that the development of the country's coal fields may follow the more progressive practice obtaining in other countries, and in those coal-producing companies in China in which foreign influence prevails.

Riverside Power House Extensions

The turbine room was extended by 152-ft. by 60-ft. to accommodate the two new General Electric 18,000 K.W. turbo-alternators. The design of this extension was prepared by the drawing office staff of the department, and the steelwork fabricated and erected by the New Engineering and Shipbuilding Works. The concrete foundations for the building and the supports for the turbines were designed by and carried out under the supervision of the Public Works Department. An auxiliary turbine room was also erected on the south-west side of the No. 1 boiler house for the housing of the two 2,000 K.W. Willans turbines.

A scheme for further enlarging the Riverside Power Station, together with extensions of the transmission and distributing system was explained in my Report to the Electricity Committee dated December 22nd, 1919, and published in the "Municipal Gazette" on January 29th, 1920.

Financial

The nett profit for the year after providing Tls. 519,256 for depreciation and Tls. 442,152 for interest, was Tls. 386,326. The estimated profit was Tls. 332,123. The estimates for 1920 indicate a profit of Tls. 735,503 after providing Tls. 585,000 for depreciation and Tls. 559,500 for interest. In June 1919 the sum of Tls. 242,000 was paid over to the Council's general funds from the profit of 1918.

The European staff at the end of the year numbered 84. With one exception all those members who had been on war service in H. M. Forces returned to Shanghai and resumed duty with the department. The Chinese staff numbered 1,671.

Owing to the long overdue home leave being given to some members of the staff, and the delayed repatriation of those who were on war service, the department still suffered through shortage of staff. The efforts of those who were called upon to carry on, and the loyal spirit of co-operation which has always marked the relations between the executive and the staff, are very greatly appreciated.

The Cost of Bicycles

In common with everything else, the prices of bicycles have increased, and we are indebted to the Raleigh Cycle Co., Ltd. of Nottingham, England, for some statistical information as to the cause. Comparatively with 1914, prices of labor and material in the cycle trade have risen enormously. Machinists' wages have risen 142 per cent., laborers' wages 165 per cent., and toolmakers' wages 182 per cent. In material, the following are a few typical instances—Steel (which enters so largely into the construction of the Raleigh as distinct from ordinary bicycles) has risen 189 per cent., tubing has risen 300 per cent., chains 208 per cent., enamel 90 per cent., and saddles 155 per cent. Packing-case timber—an item in costs, for bicycles have to be packed for transport—has risen no less than 280 per cent. In addition to this, the hours of labor are not so long as before the war, no overtime is worked, and it is not possible to work on Saturdays, which all involves a further increase in the cost of production. Notwithstanding this, the price of the Raleigh bicycle has not been increased at all proportionately. The increase, all round, compared with pre-war figures, is approximately 75 per cent. This result has been achieved by extensions of the great works at Nottingham, which allow of a much larger output, and the benefit of this is being given to the cycle-buying public, by keeping the price at a much lower figure than would have been possible had the output not been enormously increased.

Restoring China's Sovereignty

Replacing Railway Guards, with Aeroplanes, Autos and Macadam Roads

WHY should not the American Government withdraw its troops from North China? In co-operation with other Powers our troops are protecting a railway line in China, keeping open the passage from Peking to the sea and *vice-versa*, against the possibility of another Boxer outbreak. Surely, this continued violation of the territory of a great Sister Republic ought not to continue after our condemnation of Japan's presence in Shantug. How can we justify the presence of an armed American force in China and be consistent?

China won her right to sit at the Council Table at Paris. She nobly responded to the President's appeal to enter the war against Germany and religiously followed the advices from Washington. She was ready to send her millions to fight for Humanity in France. She did send hundreds of thousands of her sons to do the work behind the lines. She is to be a charter member of the League of Nations. China of 1920 is a new China. A new spirit of nationalism, of patriotism, of self-sacrifice has displaced provincialism and hostility towards foreigners. China has proven that she can resent foreign aggression. The boycott against Japanese goods will go down in history as marking the turning point from a state of apathy to one of passive resistance. If they hurry a little it will not be long before they will be ready to fight for themselves.

We are assured that in the twenty years since 1900, a new nation has been born; the instincts, customs, habits and thought of centuries have been overturned. The horrors of the Boxer year can never be re-enacted in China. There should be no further necessity to doubt the peaceful, kindly, gentle, proclivities of a people whose proclaimed ambition is to lead the world in peace and disarmament. Never again will the world be called upon to chastize China for her massacres of Christians in the north or her barbarous treatment of Frenchmen unlucky enough to cross the Tongkin border line. Why then, in the face of these truths, attested to by every one of China's American friends, should we maintain a military force at Tientsin, just because of a foolish old treaty exacted in 1900 as a guarantee against a recurrence of the events of that fateful year?

We hear the immediate reply of those who doubt China's regeneration, "oh! we cannot do that, we cannot break our international agreements or escape assuming our share of the burdens imposed by the treaty." Fiddlesticks! Is not China to be a member state of the League of Nations, when all these limitations of her sovereignty will be abolished? What are old, worn out, international agreements in comparison with justice to a great Sister Republic? Did we not break loose from the international pack and by implication, accuse our Allies of extortion when we remitted our share of the Boxer Indemnity? Why not finish the job so well begun by ordering the regiment at Tientsin and the Guards at Peking to return home at once. What a wonderful, practical exhibition of our great sympathy for China would be given to the world by such a step?

Considering the great change we are told has occurred in the Chinese character in twenty years, and the strides in aerial navigation, why cling to the hallucination that Peking can ever again be out off from the sea? A small aeroplane detachment stationed at the Legation should be a sufficient guarantee of prompt escape in the event the Chinese should have a relapse and go once more on the rampage against foreigners. At all events, it is inconceivable that any demonstration will ever be made against the Americans. With the international port of Tientsin only an hour away by plane, Tsingtao, Dairen, Port Arthur and Korea, three to four hours, and Shanghai six hours, why maintain our troops in idleness guarding a railway for the relief of the Legations, when the rickety old capital could be bombed to powder in an hour by a few squadrillas having their bases in the international settlements or in Japanese territory?

The elimination of these railway guards will be followed by aeroplane stations in the Legation compounds, which will call, in turn, for other stations at Tientsin, Tsingtao, Shanghai and Hankow, without mentioning the bases already established in Japanese territory. Foreign firms at Tientsin might lose a little trade through the withdrawal of the troops stationed there, but their manufacturers will benefit in other directions. Perhaps, however, we are looking at this matter from a too pronounced Chinese viewpoint. Perhaps the Americans and foreigners in Peking and Tientsin place no faith in the transformation of the Chinese character, and feel safer when there are some of their own soldiers around to protect them in case of necessity. Perhaps the Ministers-Plenipotentiary and Envoys Extraordinary consider it beneath their dignity to have to fly from Peking in the event of trouble. It is difficult to open a market for aeroplanes under such conditions. But if not aeroplanes, why not automobiles and trucks. Every Minister has an auto and has no place to go in it.

Why should not the Powers, led by America, make a joint demand upon China for the immediate construction of a boulevard, not a mere road, between Peking and Tientsin, to be continued northwards to Shanhaikwan and southwards, if necessary, to Shanghai. On the condition that these roads are completed within a reasonable time, the railway guards will be withdrawn, and not before. Why place all our eggs in one basket and expose the lives of the Ministers, Legation staffs and the hundreds of foreigners now residing within the walls of Peking, to the mercy of a single track railway? Why not have the boulevard as a supplementary line of retreat?

In the event of trouble what guarantee have the Ministers and foreigners that they can commandeer enough railway trains to escape in?

The Chinese Government would welcome such a chance to demonstrate their friendly feelings and complete change of heart. They would receive great support from the whole nation. The funds undoubtedly would be subscribed over night to construct a road, or several roads that would facilitate the evacuation of the capital and the sacred soil of the Metropolitan province from the presence of the foreigner. The Chinese officials would also provide themselves, on the side, with a proper road for joy-riding, and a quick egress to the security of the Foreign Settlements whenever they have a sudden attack of official sickness, or are striken with a sore leg over night, get sulky, or when the tide of their political fortunes counsels a quick gataway, and the trains are watched. An auto on a dark night has many advantages other than purely political, which the young bloods of the capital have not been slow to recognize. Think of the joy of riding to Tientsin for a night's frolic with the prize beauties of Soochow and back again in Peking in time for official duties.

If, through the influence of the Diplomatic Corps, such a boulevard can be built, it will still have the satisfaction of knowing that aeroplane can be utilized for a more rapid exit if hard pressed. They will then have created a market for road machinery, autos and planes. With a good, hard, smooth, tarred, macadam highway from Peking to the sea, the foreign Governments need have no further anxiety about the safety of their representatives, and therefore no necessity for retaining their armed forces on the ground in violation of China's sovereignty and the provisions of the League of Nations.

Let us be practical. Out with the Legation Guards! Home with the Railway troops! Build the great highway to the sea!

G. B. R.

Chinese Flock to France

A New Industrial Movement

WHAT is behind the sudden desire of Young China to be educated in France? Ten to twelve thousand students are expected to arrive in that country during the next two years. A plan has been launched whereby the French Government with the co-operation of the Chinese Government, is to receive Chinese students for a one year training in "civilization." They will then be returned to China to spread the story of the great progress of civilized countries. Students at the rate of one hundred and fifty a month have been coming to France for the past year, and during the year at least eight hundred a month are expected, the French steamship companies offering a special cheap rate for this class of traffic. It is claimed that these men are not of the lower classes but come of good families and anxious to learn the methods of other countries.

The influx is ascribed to the fact that the Chinese are no longer attracted by German or Japanese colleges, owing to the war and their resentment against Japan over the Shantung award, and their aversion to the United States because of the restrictions upon Chinese immigration which prohibits their entrance except under the most humiliating conditions. In seeking for the real cause of this sudden change in Chinese yearning for foreign education, is it not more probable that the stories of French life carried back to China by the hundreds of thousands of coolies who worked behind the lines has had something to do with the movement. It was the first taste these coolies ever experienced of the joys of civilized life, good pay, comfortable lodgings and an intercourse with a white element which accepts them as equal. Their experience in France opened their eyes to the difference in treatment accorded the Yellow Man by different families of the White Race. It is entirely probable also that the movement has been stimulated by the French Government to attract labor to its mills and industries during the reconstruction post-bellum epoch, and so educate thousands of Chinese mechanics in French methods of manufacturing. France is after her share of world trade as soon as she is in a position to get after it. As heir to the German mining regions, France will take the former's place in the metallurgical industries of the world, and within a decade will become the most dangerous competitor to England and America for foreign markets. While America is educating the Chinese along ethical lines and inoculating them with the germ of Democracy, the French are setting out to capture their material education. Ten thousand Chinese trained in the handling of French machine tools and versed in their ways of doing things, will be a more effective bid for the metallurgical trade of China than twenty thousand students turned out of American colleges with degrees of Doctor of Philosophy or Law.

The Chinese have been sending their students to us for some years as the result of the remission, in part, of our share of the Boxer indemnity. We have been too prone to take undue credit to ourselves for what we are pleased to call our wonderful generosity and justice towards China. It is well to remember the swift response of one of China's statesmen at the time the Boxer indemnity was returned, on the condition that it be expended in educating young Chinese in American colleges. He made a rapid calculation of what it would cost for the passage and upkeep of these students and proved that it was a good stroke of Yankee business, as every cent was returned to American merchants, boarding house-keepers, and colleges. He positively refused to admit there was the slightest trace of philanthrophy or justice in our action. Yet there are many others who recognize the the sincerity of our desire to assist them, and many who look to us as their spiritual guide in the future. But there is a wide gulf between the class and the masses of China who are seeking the material advantages of a connection with this country, the right to enter and work at our trades, learn our arts and take back with them our practical ideas. To this class the gate is barred. This is the class upon whom will fall, the industrial regeneration of China. If they cannot gain their experience in this country, they will apply elsewhere.

Here we have the reason for the great influx of Chinese into France to remain there a year or so and return to China to spread the ideas of "modern civilization" as it is euphemistically called by the French and Chinese authorities. We have invited attention in other articles to the preparations being made to place China on her feet with American money and loans and the preliminary steps to wrest from us the material benefits that should accrue to our manufacturers in the supply of materials. With an engineering and artisan class educated in France or Europe, they will demand French and European tools, machinery, and the other adjuncts to industry they are accustomed to handle.

What between our idealism in the matter of loans, our stringest exclusion laws, and other factors, there is an excellent opportunity for our European competitors to gradually dominate the great Chinese and Asiatic market. There is a political feature to this movement that compels attention. Mr. John Moffat, who arrived in New York the other day, came with a message of what he termed nation-wide interest concerning the new menace of the Far East and a seasonable cure for it. He says:

"This is one of the great epoch-making schemes of the world. Ancient China civilized is almost too remarkable to be believable. It is not an unreasonable supposition that China someday may be vitalized. Germany is working vigorously to acquire strength, man-power and resources from Bolshevist Russia, she still looks forward to war and domination through it, and is trying to absorb strength from Russia and again become a world menace. There is a great threat that Boleshevists may get hold of China if she remains in her present condition. China, sooner or later will have to adopt Western ideals. She may do it as a vassal of the Russian Bolshevist or she may do it as a great free sister republic. However, she does it, she will become a great Power. Thousands of Germans speak Russian and thousands of Russian speak Chinese. Germany, Russia and China have an unlimited supply of man power. With the Bolshevist element they are more than dangerous."

Mr. Moffat's plan is for the Americans to contribute funds for the purchase of a house in Paris for the Chinese Student's Committee, and is sent here by this organization for that purpose. He carries letters from Marshal Foch, André Tardieu and others. It is a peculiar picture of Chinese faith in our altruism. Barred from the United States by our exclusion laws, attracted to France by the experience of their compatriots during the war, and encouraged to go there by the Chinese and French Governments to educate them in "modern civilization," which in this case means industrial efficiency, the Chinese Student's Committee turns to the United States for the funds which will enable them to carry on. It is the same old story told in another way. Mr. Moffatt's letters to various millionaire patroners of charity and others, will bear fruit. Americans will finance the new movement. We will help the cause of civilization and bind China tighter to us through common ideals, but the material benefits that will follow such an investment will undoubtedly go to France. It cannot be otherwise. If Young China sets out to learn "modern civilization," they cannot do in the United States. The doors of Europe are open, ours are closed. We cannot have our cake and eat it too. Young China will look to us for spiritual guidance and in practical matters will turn to Europe.

G. B. R.

The Work of the Thrift Society

Mr. Wang Ching-hui, the founder of the Societe Franco-Chinoise d'Education Paris-Shanghai, and the promoter of the South West University delivered a very interesting lecture at the World's Chinese Students' Federation on the subject of "Chinese students in France." The lecture hall was crowded. Mr. Wang, in part, said :—

"I think that the present moment is very opportune for Chinese students to study in France so that they may learn from personal observation the strenuous measures being adopted in France in the direction of reconstruction so as to restore normal conditions. The war has driven

home one important lesson, namely that science is the decisive factor in modern warfare. The new elements introduced into the realm of belligerent operations, such as the submarine and the aeroplane, are all based on scientific principles France lived up to this revelation, and her educational program was maintained during the war as far as circumstances permitted.

"In the 1st year of Min Kuo (1912) Mr. Li Yu-ying established the Western Education Thrift Society, the whole object being to send Chinese students to study in Europe under a thirft system whereby a saving of 50 per cent. of the usual expenses is effected.

"China, let us remember, has a dense population; she is of a vast area and has an exceptionally long history of an individualistic civilization. To bring about anything worthy of the name of reconstruction, we must rely on the effort of a large section of our countrymen to introduce the new civilization of he world to bring our own up-to-date. A Chinese studying abroad has the best opportunities to learn the principles of reconstruction by reason of his congenial environments. If we have something like 100,000 students abroad, we ought to say 'Let us have more.'

"It was originally planned that the annual expenditure to be incurred by each student under the thrift plan is to be $600. In some cases, students arriving in France failed to gain admission into one of the French universities because in some universities the scale of charges exceeds the provision of $600 a year; but these are exceptions to the rule. There were two other causes of disappointment, some of the students did not take with them the full amount of $600; some others did not follow the regulations of the society.

"Great difficulties were experienced in the beginning of the war on account of the non-arrival of remittances from China. Mr. Hu Wei-teh, the Chinese Minister in Paris, relieved the embarrassments of the students by advancing a total sum of 80,000 francs. The loans will, of course, be repaid upon the arrival of remittances from China.

"It is true that the cost of living has increased as a result of the war. But to counterbalance this condition comes the low exchange of the franc, which makes it possible to obtain as much as 6,000 francs in return for $600. The students under the thrift system will thus be put on the same financial basis as the students sent to France at government expense. Should the exchange rise within the next two years, which seems unlikely, the cost of living will, in all probability, correspondingly decrease.

"It is now plain that when we can send a student to France at an annual cost of $600, the expense is about the same as that incurred in Japan. It is lighter than what is charged at the Hongkong University. General Chen Chiun-ming is sending to France students from a number of districts in Fukien on the ratio of one to three students per district. The Canton Government is also adopting like measures. The results will mean an addition of from 100 to 200 students. If every province will follow this example, the results will certainly be very gratifying.

"Reference must here be made to the Industrial Educational Society. This society is run on a basis different from that of the thrift society. Its history is worth being recalled. Mr. Li Yu-ying opened a bean-curd factory in France and he employed Chinese laborers, and as they were well paid, they were able to afford the expenditure of their education after working for a time in Mr. Li's concern. In France foreign laborers are allowed to work provided they would agree to the conditions: they must work for wages on a uniform basis and they must answer the call of trade unions to strike. This means to say that only skilled labor is sure of employment. After working for one or two years, the earnings for wages will be enough to pay for the educational expenses."

The Royal Bank of Canada

The year 1919 has been a notable one for The Royal Bank of Canada. The fiftieth anniversary of the founding of the bank was commemorated this year and for the first time the total assets have exceeded the $500,000,000 mark. The past twelve months have also witnessed a great extension of the foreign connections of this progressive institution. An important development has been the establishment of branches in the leading centres of South America. Before the outbreak of the war The Royal Bank of Canada inaugurated the policy of extending its facilities to the continent of South America, but when 1,500 of the bank's employees were called to the service of their country, it was found necessary to postpone the establishment of new branches.

The conclusion of hostilities enabled the bank to proceed with its plans, and during the past year about a hundred new branches have been opened in Canada, the West Indies and Central and South America. On October 1 the Rio de Janeiro, Brazil, branch was opened for business, and this was followed a month later by the establishment of a branch at Buenos Aires, Argentine. Branches are also being established at Montevideo, Uruguay, Santos and Sao Paulo, Brazil, and at Barranquilla, Colombia.

In order to cope with the growth of business with France and to participate in the work of reconstruction, The Royal Bank of Canada (France) was organized and a banking office opened at 28 Rue du Quatre-Septembre, Paris, on June 2nd, 1919 Similarly in the previous year a branch of the bank was established at Barcelona, Spain, especially to cater to the large amount of business transacted between that country and Latin America. The Royal Bank of Canada has offices in London, at Bank Buildings, Princes Street, E.C., and an agency in New York at 68 William Street. The business of the latter has increased to such an extent that it was recently deemed advisable to purchase the fifteen-storey building in which were located the bank's premises.

At the beginning of the year 1919, the bank formed a very important association when the "London County Westminster & Parr's Bank, Ltd." bought stock of The Royal Bank of Canada to the nominal value of $1,000,000 for which it paid $2,000,000. This ensures a very close and valuable working arrangement and drawing facility, as the London County Westminster & Parr's Bank, Ltd., have world-wide connections and are one of the strongest financial institutions.

The Royal Bank of Canada has been one of the pioneers in the banking line in the West Indies, where the facilities extended have been of great value in the development of trade. Operations were commenced in Cuba immediately after the close of the Spanish-American war, and to-day the bank has thirty-two branches, covering all important points in the island and including five branches in the city of Havana.

The history of The Royal Bank of Canada has been one of remarkable progress. Founded 1869 under the name of 'The Mrechants Bank of Halifax," its importance as an international institution began in 1900, when the Head Office was moved to Montreal, and the name of the bank changed to the present one. In the year 1910 a series of important mergers commenced when the "Union Bank of Halifax" was taken over. This was followed in 1912 by the taking over of the "Traders Bank of Canada," in 1914 of the "Bank of British Guiana" and the "Bank of British Honduras," in 1916 of the "Quebec Bank" and in 1918 of the "Northern Crown Bank." To-day the total paid-up capital and reserves of the bank amount to $35,000,000 and total assets exceed $500,000,000.

The branches of The Royal Bank of Canada now cover the leading centres of Canada. the West Indies, Central and South America and the great financial centres of the world. In addition to the offices in New York, London, Paris and Barcelona, the bank has 544 branches in Canada and Newfoundland, 44 in Cuba. Santo Domingo, Haiti, Porto Rico and the French West Indies, 13 in the British West Indies and 15 in Central and South America. The bank is, therefore, in a position to offer unrivalled facilities to traders doing business with these countries.

Japanese Activities on C. E. Railway Evoke Serious Protest

Japanese activities in the zone of the Chinese Eastern Railway, North Manchuria, have caused great anxiety in the minds of Russians resident in the region, as well as to the Diplomatic Corps at Peking. The Foreign Technical Board, comprising representatives of America, Great Britain, France, Japan, China, Russia and the Czecho-Slovaks, which was appointed some time ago to control the operation of the railway, regarded the reported outrages by Japanese as too serious to be endured without complaint and on April 14, the following vigorous protest was made. When it is remembered that it comes from responsible foreigners its significance will be appreciated. The protest says:—

Whereas (1) Two Russian Railway employees at Imianpo were suddenly arrested and summarily shot on April 6th by some Japanese soldiers without trial;

Whereas (2) In the evening of April 8th two Russians were refused passage over the Sungari bridge at Harbin by Japanese soldiers, in spite of their passes entitling them to such passage. One of them was thrown over the bridge and the other had his head badly cut up by these Japanese soldiers. Both were badly injured;

Whereas (3) In the evening of April 8th eight railway employees were suddenly arrested at Hailar by some Japanese soldiers and were locked up in a Japanese Military car to be transported to some unknown destination;

Whereas (4) Three Russian railway men were arrested at Manchuria Station on April 10th by Japanese soldiers;

Whereas (5) These violent acts have created a widespread excitement and indignation among the railway employees and are most liable to precipitate grave troubles leading to the interruption of communications, the delay of Czech evacuation and the disturbance of the whole region, all of which tend to defeat the purpose and function of the Technical Board;

Whereas (6) These acts are regarded by the Technical Board as being in direct contravention to the Interallied Agreement covering the guarding of the Chinese Eastern Railway which duty was assigned to the Army of the Chinese Government by the Interallied Powers, and that the military forces of no other nation have any authority in the guarding of this Railway;

Whereas (7) The Technical Board protests in the strongest possible manner against the interference and high handed actions of the Japanese troops in these and similar instances, and ask for an assurance from the Japanese authorities that such acts will not be repeated.

Resolved (*a*) That this protest be placed on record.

(*b*) That copies of this protest be telegraphed by the Secretary of the Board to the Interallied Committee and that such member of the Board be requested to telegraph the same to the representative of his country at Peking.

(*c*) That the Japanese member of the Board be requested to hand a copy of same to the Senior Japanese officer commanding the Japanese troops in Manchuria and Siberia.

The above resolution was presented by the President and passed by the Technical Board, April 14th, 1920, with the representatives of Great Britain, America, France, China, Russia and the Czecho-Slovaks assenting and the Japanese Representative dissenting.

The Baldwin Locomotive Works

Locomotives Recently Built for Service in China

ONE of the most important fields in the world for railway development at the present time is China, where there is urgent need for the construction of a large amount of new mileage and the material improvement of existing lines. American manufacturers of railway equipment are aiding this development by furnishing motive power, rolling stock and other supplies; and locomotives of American design are proving well qualified to meet the requirements of the Chinese lines.

During the year 1919, The Baldwin Locomotive Works built sixty-two locomotives for shipment to China. These represented twelve different types, designed for various service conditions. Five of these locomotives are shown in the accompanying illustrations.

The tank locomotives shown in Figures 1 and 2 were built for the Hupeh Government Mining Bureau, located in the Province of Hupeh. Two locomotives of each type were constructed, and they are the first engines to be placed in service on a new line. The four-coupled locomotive weighs 60,700 pounds, and has cylinders measuring 13 by 22-in., and driving-wheels 44-in. in diameter. With a short wheel-base, and all the weight on driving-wheels, this design is specially suitable for switching service. The six-coupled locomotive is considerably larger, and with a two-wheeled radial truck at each end, is suitable not only for switching, but also for local freight and passenger service. This wheel arrangement permits the locomotive to be operated in either direction without turning, and is specially suitable for service on lines having sharp and frequent curves. The total weight of this locomotive is 122,500 pounds, of which the driving wheels carry 96,500 pounds. The cylinders are 16-in. in diameter by 24-in. stroke, and the driving wheels are 44-in. in diameter.

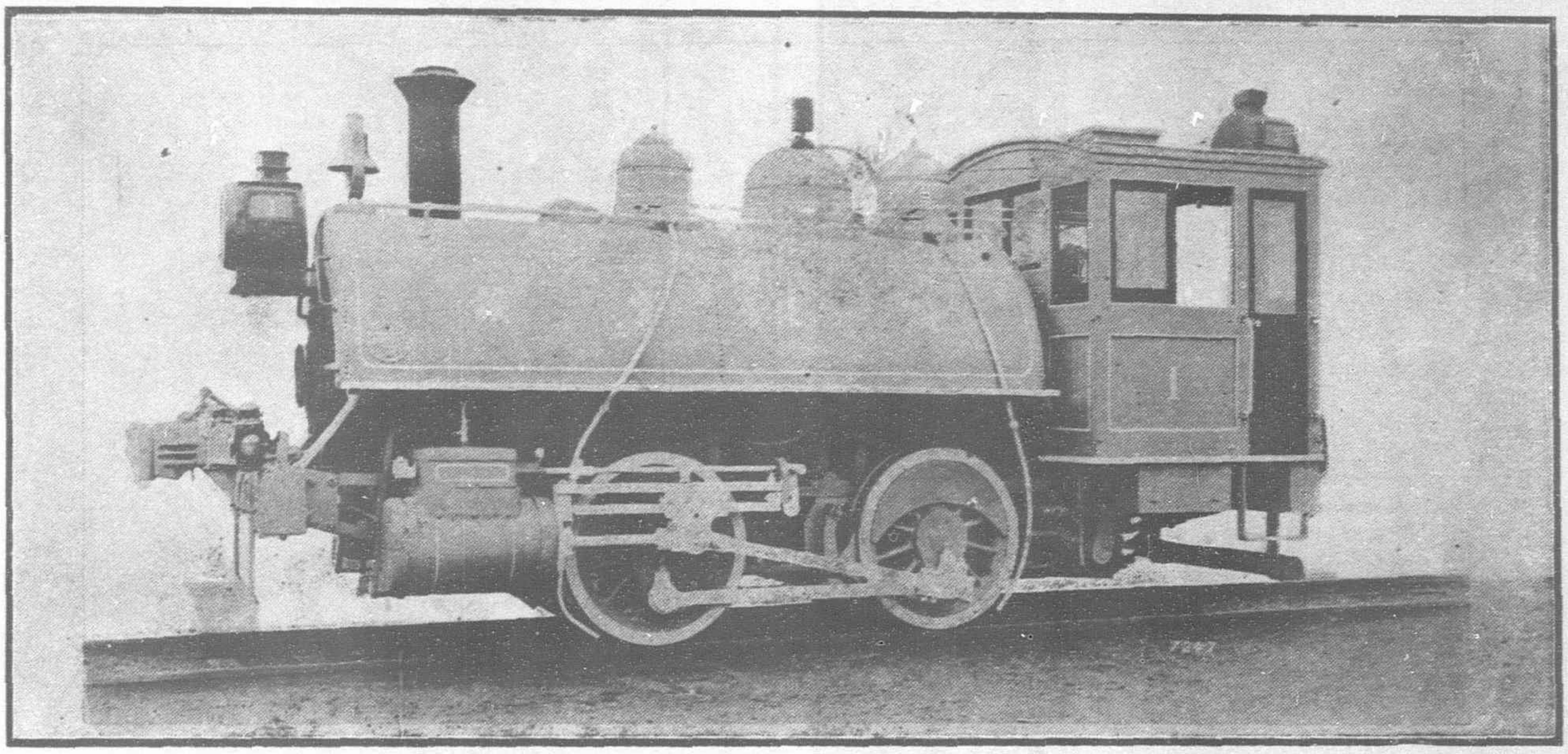


FIG. 1

Both these locomotives are of standard gauge, and are designed in accordance with American practice.

Figure 3 represents a locomotive of the eight-wheeled or "American" type, built for the Canton-Samshui Railway. This road handles an important passenger service, but the train loads are not very heavy, and a locomotive of this design is of ample capacity. The eight-wheeled type, when used for work that is within its capacity, is exceedingly efficient and economical to operate; and this locomotive represents the best practice for an engine of its weight designed to use saturated steam. The cylinder dimensions are 17 by 24-in., and the driving-wheels are 66-in. in diameter. The total weight of the locomotive in working order is 111,200 pounds, and the tender weighs 70,000 pounds additional.

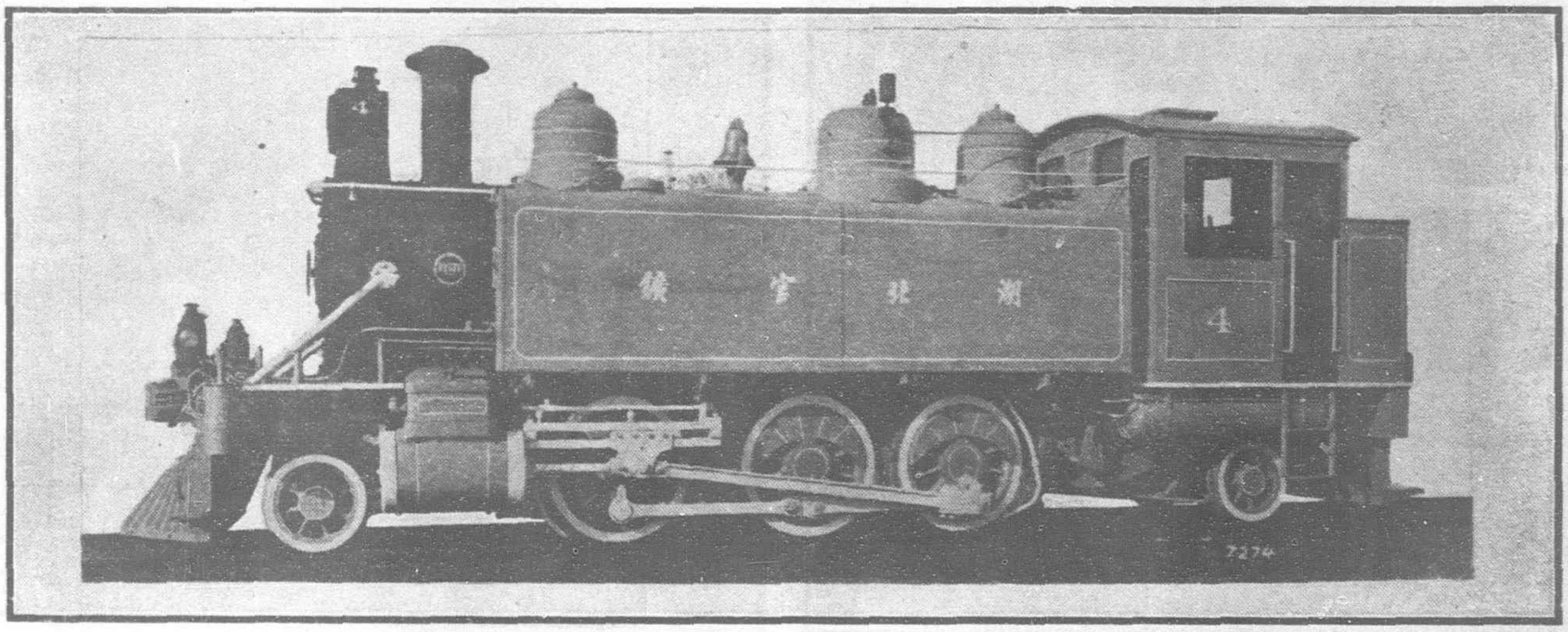


FIG. 2

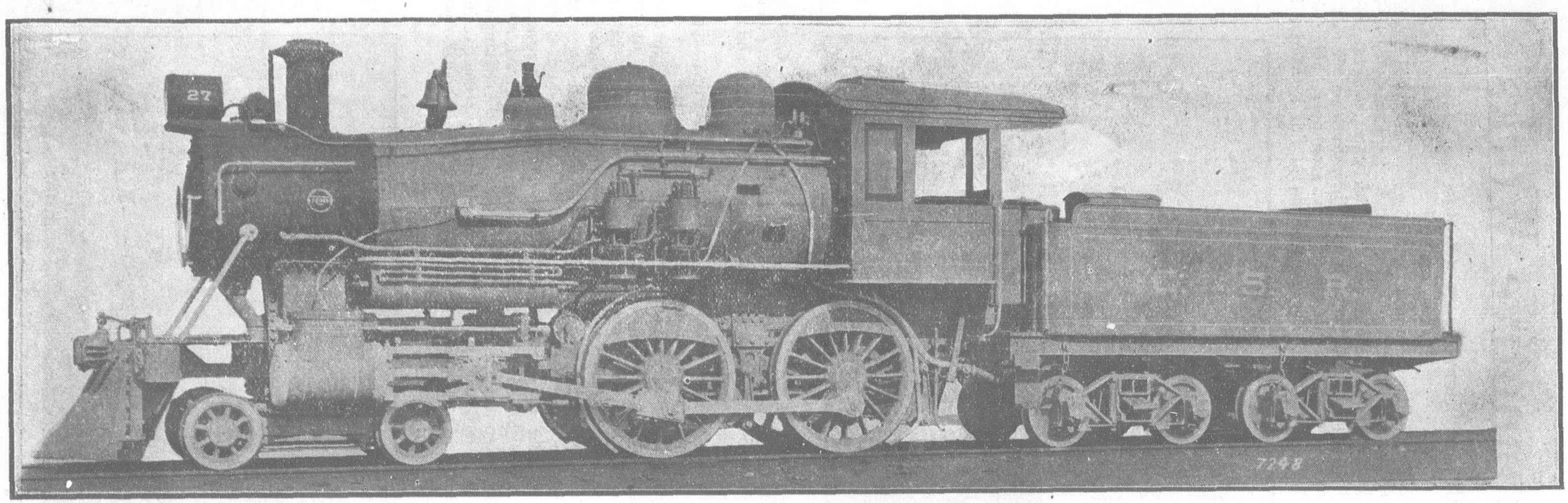


FIG. 3

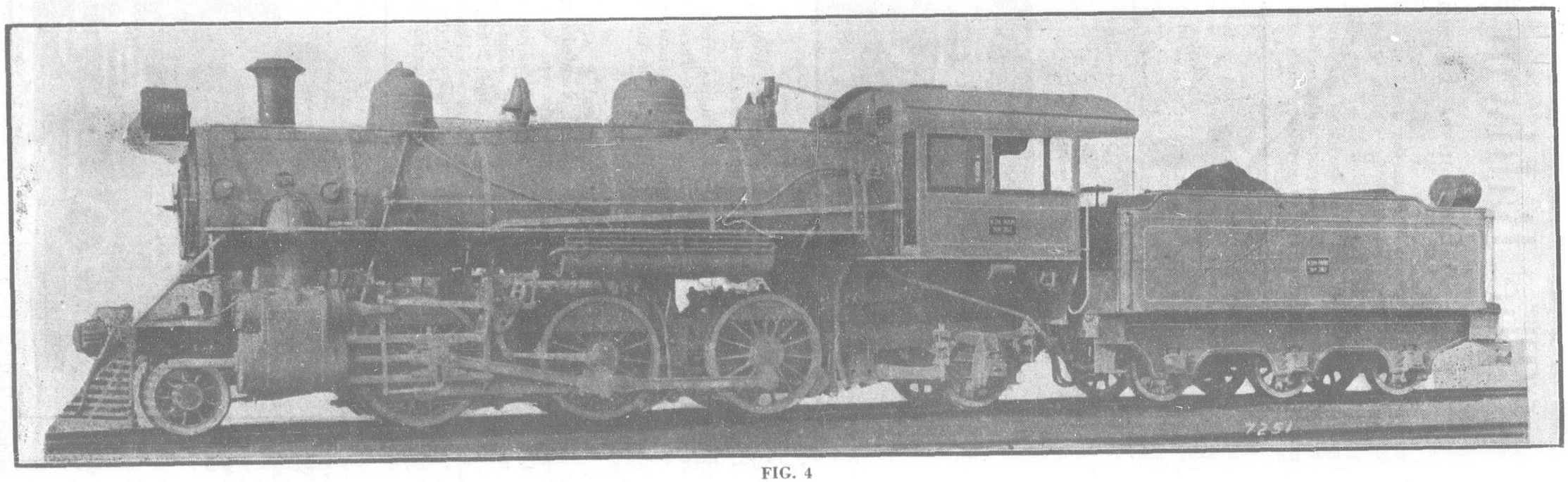


FIG. 4

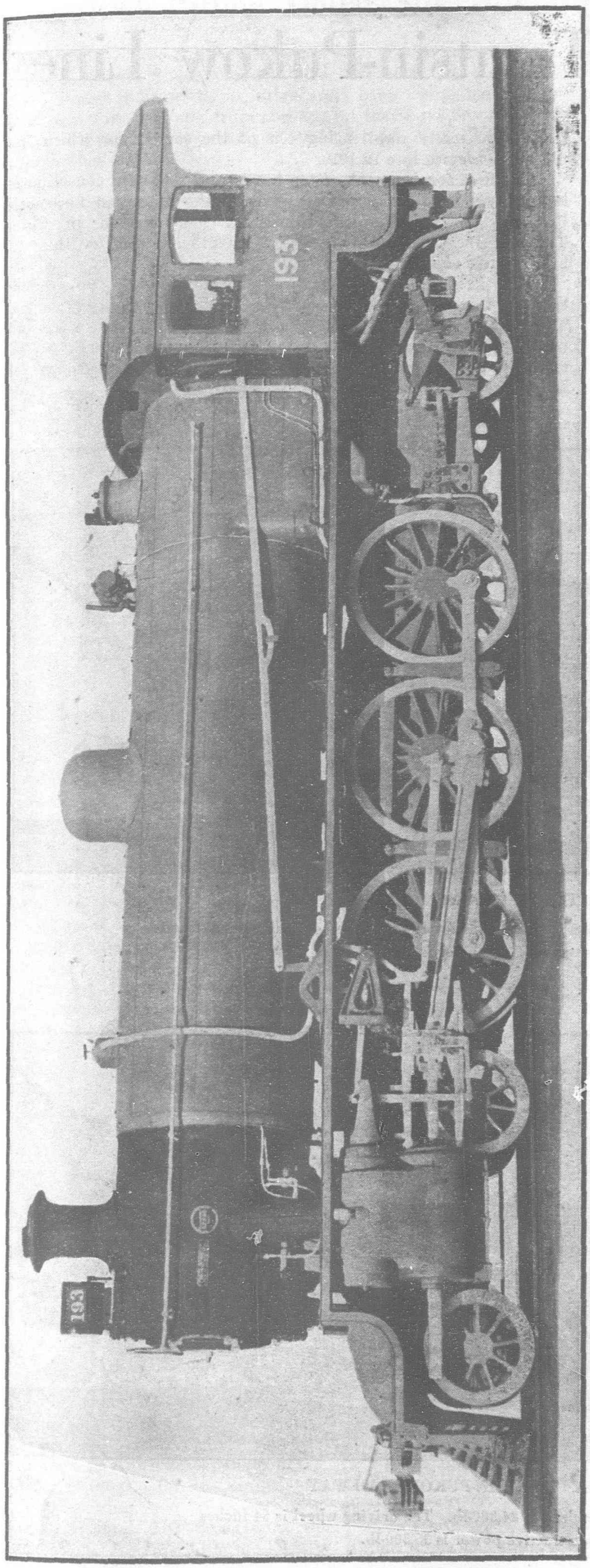


FIG. 5

Figure 4 represents one of ten Prairie type locomotives of interesting design, which were built for the Peking-Hankow Railway, one of the large Chinese trunk lines. The locomotives and rolling stock of this line are almost entirely of French design and European manufacture. The new Baldwin engines were built from designs and specifications furnished by the railway, with certain modifications, which conform to American practice, and are suited to Chinese operating conditions. They have considerable reserve capacity over that required to handle present train loads, and their flexible wheel-base will prove a great advantage in operating on this railway. These locomotives are equipped with super-heaters, and can be used in either passenger or freight service. They have bar frames and equalized wheel-loads, and with a two-wheeled radial truck at each end, they can easily traverse sharp curves. The steaming capacity is ample for heavy duty, and the boiler has a wide, deep firebox which is placed back of the driving-wheels and over the rear truck. The cylinder dimensions are 20 by 26-in., and the steam distribution is controlled by piston valves operated by Walschaerts valve gear. The driving-wheels are 59-in. in diameter. This locomotive weighs 154,600 pounds; and the tender, which is of the six-wheeled type with plate frames, weighs 92,000 pounds additional.

Figure 5 shows a large locomotive of the Pacific type for the Peking-Mukden Railway. This is one of a group of locomotives which have been specially designed to inaugurate a new passenger service, calling for the operation of heavy trains at fast schedules. The passenger locomotives heretofore used on this line, although designed with large driving-wheels for high speed service, are comparatively light and are inadequate to cope with the new train service. The Pacific type locomotives have the same size cylinders as those of the Peking-Hankow engines previously described, but the driving-wheels are 66-in. in diameter, thus giving higher speed capacity. The boiler carries a steam pressure of 200 pounds, and has a wide firebox placed over the rear truck. Interesting constructive details include plate frames, piston valves 11-in. in diameter, cast-steel piston-heads, and a light design of Walschaerts valve motion controlled by a screw reverse mechanism, which is placed on the left-hand side of the cab. The total weight of the locomotive in working order, without tender, is 171,900 pounds.

The tenders of these locomotives were built in the shops of the railway company, from material furnished by The Baldwin Locomotive Works.

These locomotives constitute an interesting addition to the motive power of the Chinese railways. They were all specially designed for the conditions to be met, and their success in service may be confidently anticipated.

American Safety Razor Opens Foreign Branches

Combining three of the largest safety razor manufacturers in the world, the American Safety Razor Corporation continues to attract favorable attention by the manner in which its business here and abroad is being developed.

Manufacturing and selling the Gem, Ever-Ready and Star dollar safety razors, the company is said to control 80 per cent. of this type of razor business throughout the world.

The high rates now charged by barbers for shaves are causing thousands of men to shave themselves. As a result safety razors, and these of the American Safety Razor organization especially, are in increasing demand.

With their products, which also include shaving brushes, soaps, powders, etc., widely known throughout this country, and a growing demand created in Europe, means were needed to distribute the products in foreign countries.

To this end the American Safety Razor Export Corporation, a subsidiary of the manufacturing company, was formed. This company handles the foreign sales and distributions for the parent company and is reporting excellent progress.

The constant growth of the company, in keeping with the official announcement of expansion plans, indicates that earnings for 1919 will be more than the estimate of $1,500,000 announced.

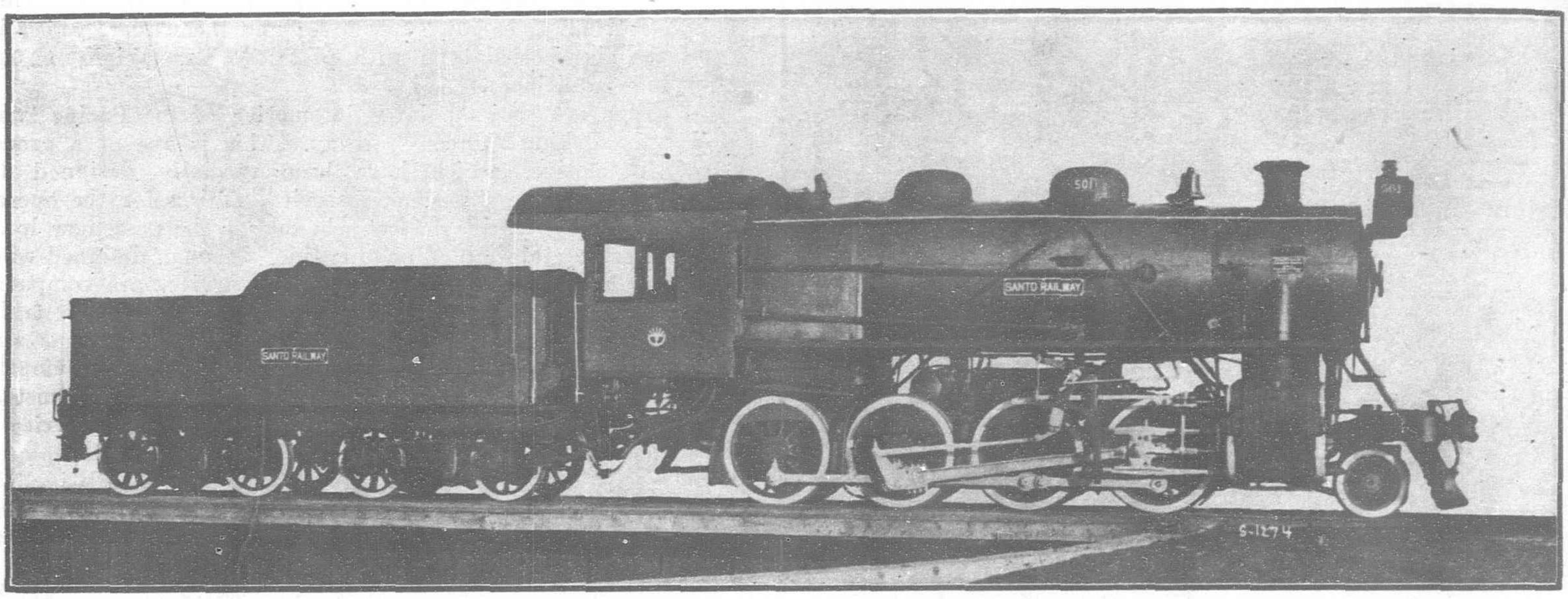
New Power for the Tientsin-Pukow Line

TRAVELLERS on the Tientsin-Pukow Railway will rejoice to hear that at last new locomotives are being purchased to develop the passenger, as well as the freight, traffic. On April 1 a contract was closed with the American Locomotive Company, of 30 Church Street, New York, for twelve Pacific type locomotives for passenger service. These are the largest and most powerful passenger engines in the Far East, and it is expected that they will be in service about October of the present year. If the authorities use these engines to their best capacity they will materially shorten the time of the journey between Peking and Shanghai.

On February 1 last a contract was closed by the same railway with the same company for twenty Mikado type freight locomotives, practically duplicating ten of the same type which were placed in service late in 1919.

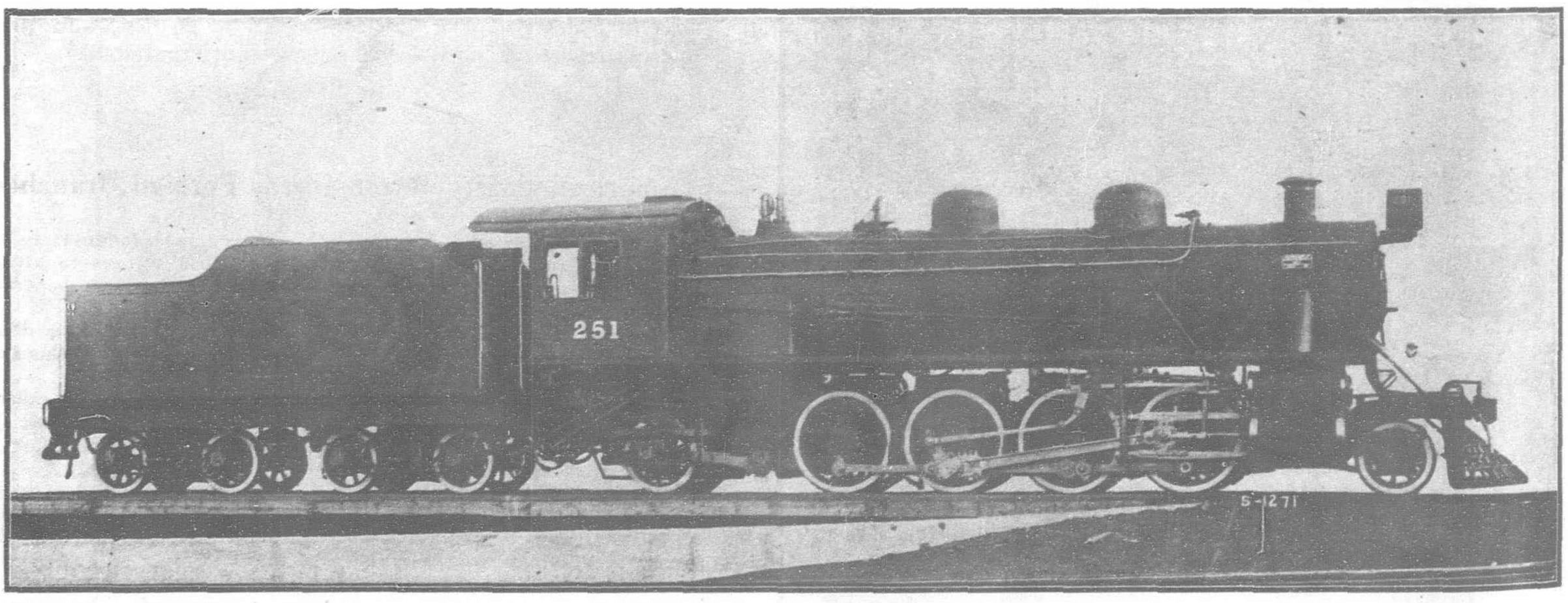
The first consignment of ten heavy and powerful consolidation locomotives for freight service, built by the American Locomotive Company for the Shantung Railway, has arrived in China. These engines are duplicates of fifteen others built for this road by the same company.

The Peking-Suiyuan Railway authorities are now having three Mallet and five Mikado type freight locomotives erected. These duplicate others of the same type built by the same company. These Mallet type engines are the most powerful locomotives in the Far East, and are used exclusively over the very heavy grades in the Nankou Pass, north of Peking.



LOCOMOTIVE BUILT FOR THE SHANTUNG RAILWAY

The weight of this locomotive in working order is 159,500-lb., with a tender of 104,700-lb. The maximum tractive power is 32,500-lb. The driving wheel diameter is 54 inches.



LOCOMOTIVE BUILT FOR THE TIENTSIN-PUKOW RAILWAY

The weight of this engine is 194,500-lb., with a tender of 124,300-lb. The driving wheel is 54 inches in diameter. The maximum tractive power is 35,300-lb.

America's Billion Dollar Silk Bill

The people of the United States are buying silk manufactures at the rate of over $1,000,000,000 a year. Never in the history of her silk industry have the manufacturers been compelled to pay as high prices for raw silk from abroad, yet they have brought into the United States in the year just ending more raw silk than in any preceding year.

Reeling Room of China Silk Filature, Showing Children Preparing the Cocoons by Boiling, Rough Brush in Smaller Girl's Hand Catches Fibers of Cocoons which are then Picked up and Drained in Perforated Pan

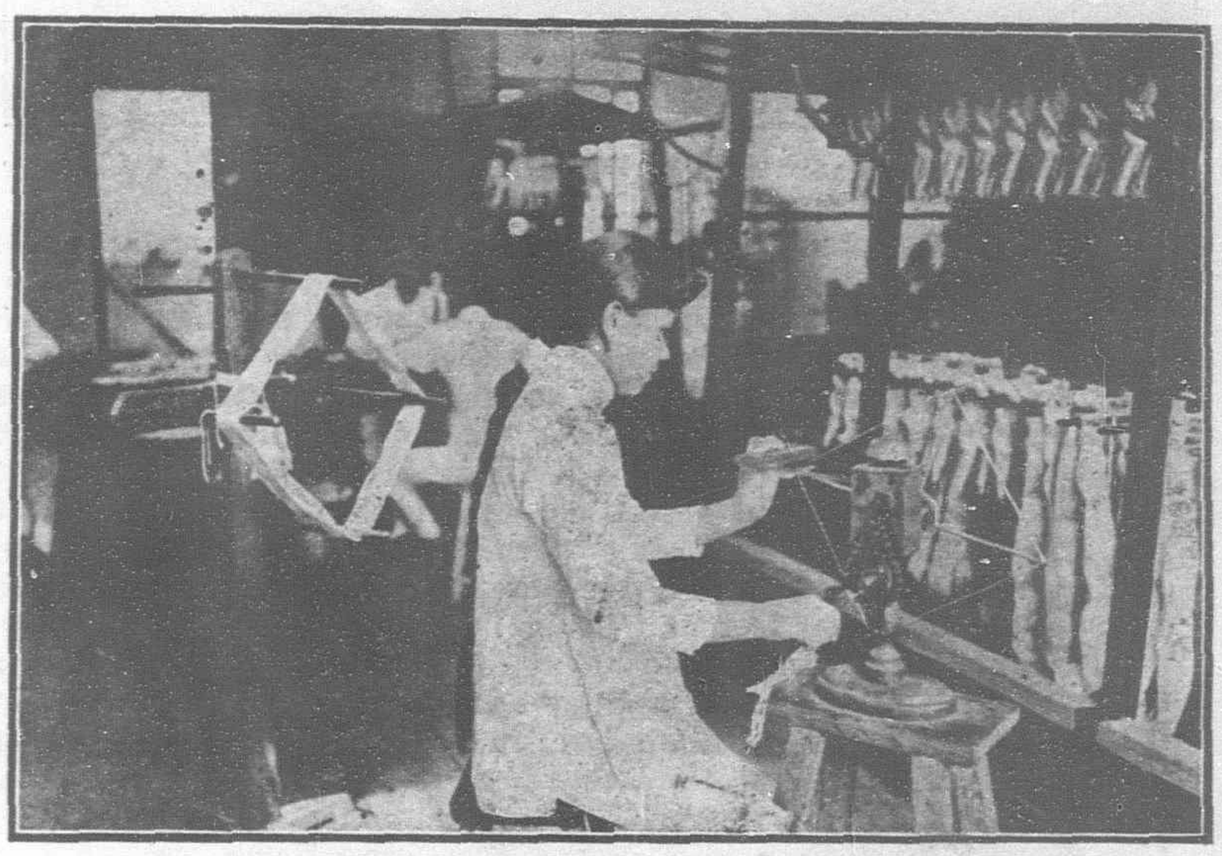
The value of the raw silk imported into the United States in the calendar year 1919 will, according to an estimate by the National City Bank of New York, probably exceed $300,000,000, against $180,000,000 in 1918, $156,000,000 in the fiscal year 1917, and $120,000,000 in the fiscal year 1916, the first fiscal year in which it crossed the $100,000,000 line. These figures, it is proper to add, relate to "raw silk as reeled from the cocoons" and do not include "waste silk" which will probably add about $12,000,000 to the grand total. The quantity imported, even at the phenomenally high prices, is greater than in any earlier year. The price of raw silk imported is the "highest ever," averaging $8.42 per pound in October as against an average of $3.09 per pound in the fiscal year 1915.

This high record of raw silk importation, and also at high record prices, says the bank's statement, probably means that the outturn of the silk factories of the United States in 1919 will approximate $750,000,000 in value at the factory, as against $250,000,000 in the last census year, 1914. A comparison of the official figures of raw silk imports entering the United States in the census year with the census record of value of silk manufactures turned out in those years shows that the value of the output of the factories in 1914 and 1909 was in each case about two and one-half times as much as the value of the raw silk imported. And with the present high price of labor and other requirements of the factory, it seems quite probable that the relation of raw silk used to the finished manufactures turned out will not differ radically from those of 1914 and 1909, and that, therefore, the manufacturers' valuation of the output of the silk factories of the United States in 1919 will be about two and one-half times as much as that of the raw silk imported, or about $750,000,000.

In addition to this, the imports of silk manufactures from other countries will aggregate nearly $50,000,000 though against this she exported nearly $25,000,000 worth of the products of her silk factories. Even adding a reasonable allowance for the advance which the consumer pays over the valuation at the factories, it seems quite apparent that the people of the United States are paying "across the counter" in 1919 an aggregate value of over $1,000,000 for the manufactured silks of all sorts which they are buying.

Where does this $300,000,000 worth of raw silk come from? Chiefly from Japan, China, and Italy. Japan alone has supplied in the 10 months ending with October $194,000,000 worth of raw silk out of the $251,000,000 worth imported in the 10 months ending with October; China $45,000,000 worth; Italy $11,000,000; while the total from all other countries is less than $1,000,000 value. These figures relating to raw silk as "reeled from the cocoon" and not the "waste silk" above referred to.

Where do the $25,000,000 worth of domestic silk manufactures go? Everywhere. Of silk dress goods alone, the exports in the calendar year 1918, the latest for which detailed figures are available, went to more than 50 different countries and colonies, even including the great silk manufacturing countries of Great Britain and France, with comparatively small quantities to Italy, Japan, and China; while of silk wearing apparel, the exports went to more than two-score countries. Canada was the largest purchaser of her silk dress goods with a total of nearly $7,487,000; Argentina $450,000; Mexico $353,000; Australia $313,000; Italy $236,000; Cuba $215,000; Great Britain $59,000 and France $30,000.



Sampling Reeled Silk in a China Filature—450 Yards are Reeled off on Machine Equipped with Revolution Counter

America's total exportation of silk manufactures made from silk brought from the opposite side of the globe amounted in a decade ago to less than $1,000,000, advancing to $2,000,000 in 1912, $5,250,000 in 1916, $7,250,000 in 1917, over $12,000,000 in the fiscal year 1918, and will, as above indicated, approximate $25,000,000 in the calendar year 1919. These figures of silk manufactures exported do not include those of artificial silk which will amount during the full calendar year 1919 to nearly $10,000,000.

Japanese in the Philippines

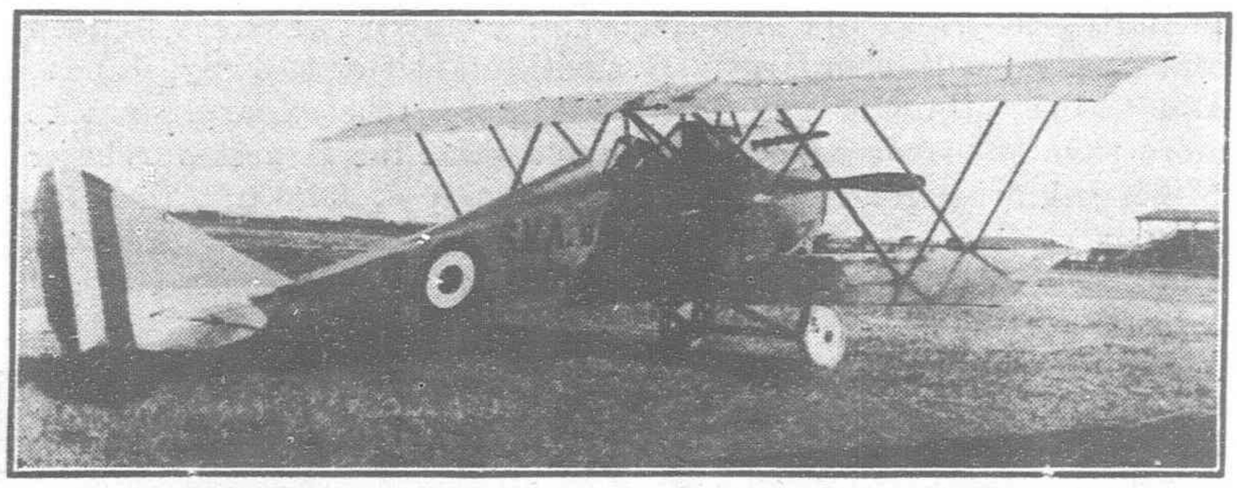
By a vote of 18 to two, and after the longest and most heated debate that has yet taken place on the floor of the Philippine Senate, in which the so-called "yellow peril," protection of lands for Philippine posterity, bribe and bad faith were invoked on one side and friendship, generosity, equity, justice and peace in the Orient on the other, the upper house of the Philippine Legislature recently passed a joint resolution which was introduced by the Senate Committee on Agriculture and Natural Resources authorizing certain Japanese corporations to complete the title to Philippine lands.

The enactment and passage of this measure was influenced by the wholesale Japanese migrations to the Island of Mindanao, but its presentation at the special sitting of the Senate was promoted by the Japanese *vs* Filipino controversy at Davao, where the Japanese have been active in purchasing lands in large quantities and applying for clear titles. Only the corporations stipulated in the resolution will be allowed to complete the titles on the lands, however, and those firms or individuals of Japanese origin holding lands without a clear title will have to retire in favor of the Filipinos.

The Rome-Tokyo Flight

Italian Airmen Arrive in China

As we go to press Shanghai is awaiting the arrival of Lieutenant Ferrarin, the pilot of the first of the Italian aeroplanes to fly the China coast on the great flight from Rome to Tokyo. He is accompanied by Mot Cappannini and is flying a S.V.A. machine.

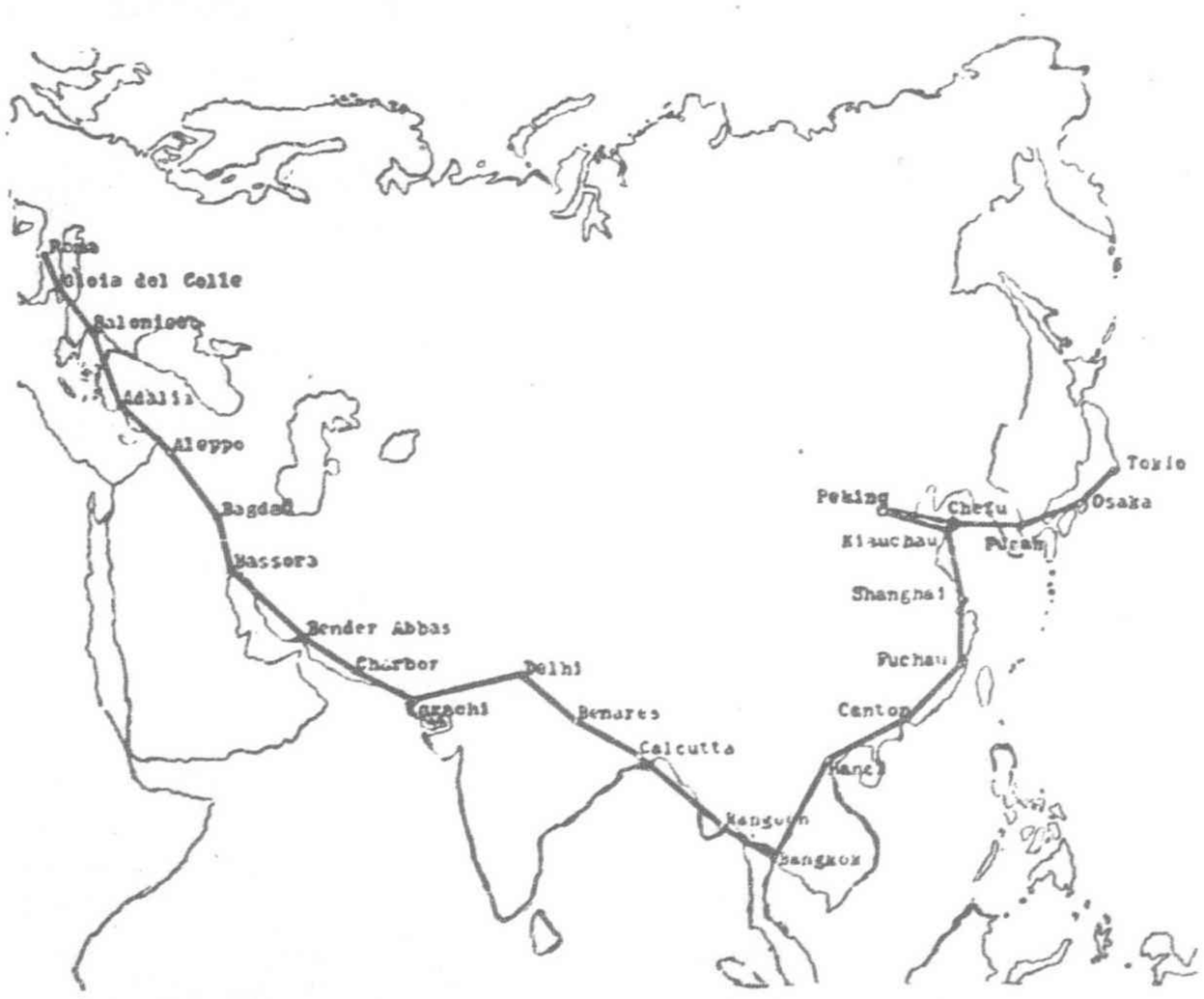


An Italian S. V. A. Machine as used in the Rome-Tokyo flight

Lieutenant Ferrarin arrived at Canton from Hanoi on April 22, being preceded the day previously by Lieutenant Masiero. Both airmen, on April 28, designed to start on the Canton-Foochow leg of the flight together, with the object of arriving at Shanghai simultaneously, but on taking off Lieutenant Masiero's machine struck a tree and smashed, the airman and his assistant fortunately escaping unhurt.

Lieutenant Ferrarin continued on his way and landed at Foochow at 6.30 in the evening of the 28th, his flight being rendered difficult by the fog. After passing Amoy he was forced to descend to about 500 feet and fly at half speed.

His intention was to start next day for Shanghai but heavy fog prevailed on the coast and rendered a flight impossible. Receptions arranged in Shanghai, including a banquet, had to be postponed.



Distance of the Various Sections of the Flight

	Miles.
From Rome to Gioia del Colle	237
Gioia del Colle-Salonica	313
Salonica-Adalia	481
Adalia-Aleppo	375
Aleppo-Bagdad	469
Bagdad-Bassora	302
Bassora-Bender Abbas	574
Bender Abbas-Charbor	351
Charbor-Karachi	359
Karachi-Delhi	668
Delhi-Benares	402
Benares-Calcutta	414
Calcutta-Rangoon	643
Rangoon-Bangkok	348
Bangkok-Hanoi	643
Hanoi-Canton	508
Canton-Foochow	442
Foochow-Shanghai	375
Shanghai-Kiaochow	394
Kiaochow-Peking	348
Peking-Chefoo	339
Chefoo-Fusan	419
Fusan-Osaka	359
Osaka-Tokio	270
Total	10,033

Chinese National Industrial Exhibition in 1921

The Chinese Government has wired to all the provinces informing the officials and the Chambers of Commerce about the coming national industrial exhibition to be held in the Temple of Heaven next year so that native products can be despatched to the exhibition by Chinese producers in time for the exposition. Mr. Chu Chi-chien, ex-Minister of Home Affairs, will be appointed Chief Director of the proposed exhibition with two associate-directors, one of whom is Mr. Yeh Kung-cho, high industrial commissioner, while the other will either be recommended by the Ministry of Agriculture and Commerce or the post will be offered to Mr. Liang Chi-chao. Mr. J. C. Ho, Chief of the general affairs department of the office of the high industrial commissioner, has specially been entrusted by both His Excellency President Hsu and Mr. Yeh to make arrangements with all parties concerned so as to make the proposed industrial exhibition a success. Mr. Ho speaks English fluently so that foreigners generally approach him in matters concerning the exhibition. The plans of the Central Government are said to be complete in every respect and that the total expenses will probably amount to the neighborhood of three million dollars. Every sort of native product from every corner of the Chinese Republic will be exhibited and for the purpose of securing articles, special delegates with commercial, agricultural and industrial experiences will be despatched to Inner and Outer Mongolia shortly. With reference to Tibet and Chinese Turkestan, the Chinese officials in Kansu, Sinkiang and Szechuan have been ordered to collect products as soon as possible for exhibition purposes. Further, in order to make the proposed exposition a success in the true sense of the word, the Government will appoint all those officials who took part in the last Nanking National Exhibition and also the American St. Louis Exposition as counsellors or advisers while the services of some foreign experts will be utilized by the Chinese authorities because the coming exhibition bears great significance to the future development of the vast and unlimited natural resources of China.

Issue of $10,000,000 Chinese National Bonds Not Welcomed by Public

The recent issue by the Chinese Ministry of Communications of National Bonds for $10,000,000 is not welcomed in the market, says the "Peking Leader"; neither foreign banks nor the Chinese people appear to consider the purchase of such bonds as a good bargain. In consequence thereof, it is ascertained that the Ministry is proposing to have the whole amount pledged to a certain leading Japanese firm for a temporary loan of Yen 5,000,000. The conditions to be agreed to in the contract are unknown, and the way in which the proposed loan will be utilized is not made public.

Dr. Sun Yat-sen's Railway Scheme

Part III of Dr. Sun Yat-sen's scheme of railways and ports for South China is held over till next issue owing to pressure on our space.

The Chinese Government has received word from the Diplomatic Body to the effect that Tls. 4,000,000 will be released in Shanghai from the Customs Surplus. The Foreign Office, to which a portion of this amount will be allotted so as to meet its expenditures abroad, is being advised by the Ministry of Finance accordingly.

Engineering, Financial, Industrial and Commercial News

RAILWAYS

Survey Kalgan-Kiatkta Railway.—According to a Reuter despatch a survey party has been organized and intends to begin a survey of the Kalgan-Kiatkta railway, on May 1. It has also been stated, says the "China Advertiser," that Mr. Chen Hsi-ling, Assistant Director of the Peking-Suaiyuan railway, will be appointed Engineer-in-Chief of the Kalgan-Kiatkta railway, with Mr. Hsieh Hsueh-ying as Chief of the Survey Department.

South Manchuria Company: Projected Increase of Capital.—Mention has already been made of the failure of the South Manchuria Railway Company's scheme to secure the formal transfer to itself of the management of the Korean Railway as part of the Government's fresh investment in connection with its projected increase of capital, owing to the firm opposition shown by the Government-General of Korea, says the "Japan Advertiser." The company has since been considering other means of effecting the increase of capital, which is now imperative in view of the growing necessity of the extension of its activities.

It is said that the company intends to raise Y.140,000,000 by distributing the new shares among the present shareholders and also offering part of them to the public. It is at present kept secret how the Government intends to make its new investment in the company, as the matter requires the revision of part of the present law, for which the approval of the Diet must be received. It is, however, rumored in certain quarters that the Government contemplates buying up the debentures of the company floated in England some time ago, which amount to Y.120,000,000 with a view to booking them as its investment. This is regarded as a substitute for the Korean Railway. This is only a rumor, and how the question will develop, time alone will show. It is at any rate expected that the company will succeed in getting the necessary funds for the long outstanding increase of capital. In this connection it may be noted that some changes have now been effected among important figures of the company. Whether this has anything to do with the present scheme is not known at present.

Lung-Hai Railway.—The people of Kansu and Shensi have addressed a joint telegram to the Central Government stating that they were surprised to learn that Director-General Shih of the Lung Hai Railway was sent to Europe to negotiate further loans for the construction of that line. It was originally fixed that the sum to be spent for the construction should be 250,000,000 francs; but since the 1st year of the Republic 120,000,000 francs has already been spent, while an additional loan of $5,000,000 was raised. It is estimated that the actual sum of money used in the construction is no more than £1,400,000. Under the various excuses, the Director-General has suspended the work of construction. He has all the time been negotiating for loans disregarding the protests of the people of the provinces. It is now requested that the Central Government will instruct him to proceed to his work of construction, and furnish details of accounts and an explanation for the necessity of another loan if there is any explanation available.—"Peking Daily News."

Extension of Tao-Ching Railway Granted.—It is understood that the application of the Peking Syndicate to extend the Taokow-Tsinghua Railway to Huaiking in Honan was granted by the Department of Communications.—"China Advertiser."

Chinchow-Jehol Railway.—A Chinese News Agency states that the Government has decided to construct a railway from Chinchow to Jehol in connection with the development of Hulutao Port. It is stated that Mr. Chow Chou-hsing, Director of Construction for the port, will also be director of the railway.

Ussuri Railway Grabs Cars.—Officials of the Chinese Eastern Railway reported recently that the Vladivostok railway junction was entirely congested, and that railway traffic was at a standstill owing to the impossibility of despatching coal to bring back the cars there belonging to the Chinese Eastern Railway. All appeals, so far, have been in vain, and the situation is going from bad to worse. The troops do not clear the cars, while the expeditionary armored trains prevent the cars from being otherwise removed. The Ussuri railway, which possessed only 3,000 cars, now has 6,400, and the number is daily increasing, and the congestion along the sidings and in the stations is ever growing. Besides the Ussuri railway now possesses some of the best cars of the Chinese Eastern Railway, and does not seem to be able to return these.

Korean Railway Project.—The "Seoul Press" reports that Mr. N. Sakaide, President of the South Chosen Railway Co., has lately been making a tour of South Korea on an inspection of routes for the railways projected by his company. The company is capitalised at ten million yen and is powerfully backed by the well-known Suzuki Firm of Kobe. It plans to construct three railway, one connecting Masan with Kwangju via Chinju, another connecting Kwangju with Songchyongli, a station on the Honan Railway, and yet another connecting Kwangju with Chonju. The railways will all be of broad gauge. According to Mr. Sakaide, the construction of the projected line between Kwangju, and Songchyongli, seven miles, will first be undertaken at the cost of one million yen. The purchase of land needed for the line will be begun about May and when this is finished, construction work will at once be taken up. Mr. S. Sakaide hopes to open the line to traffic in spring next year.

Japan "Four-Tracking" Line.—The Imperial Government Railway Bureau has decided to construct another double track parallel to the Tokaido line. The work will be started this year, and will be completed in seven years. The new line will be constructed in order to facilitate the transportation of freight, which is daily increasing in volume. The expenditure will not be very great, it is stated, because there is ample room on the present railway right of way to lay the new lines without necessitating any special preliminary work. When the new line is completed, it will be set apart for the conveyance of freight, and the present line will be used for passenger traffic.

Loan for the Lung-Hai Railway.——It is reported that Mr. Sze Shu-Tsen, Managing Director of the Lung-Hai Railway, who is at present in Belgium, has succeeded in negotiating a loan of Francs 25,000,000, to continue construction work. It is said that the interest is 8 per cent. per annum. As soon as Mr. Sze returns to China the construction of the sections between Hsuchow and Haichow and between Kuanyintang and Tungkuang will at once be started. After the completion of these two sections more loans will be concluded. The railway line of these sections will be made security for the loan.

Shanghai Tramways.—Following is the Traffic Return of the Shanghai Tramways (Foreign Settlement) for March, 1920, and for 3 months ended 31st March, 1920, with figures for the corresponding periods last year:—

	March, 1920.
Gross Receipts	$196,444.86
Loss by currency depreciation ...	50,800.80
Effective Receipts	...Mex.$145,644.06
	March, 1919.
Gross Receipts	$164,928.56
Loss by currency depreciation ...	41,081.48
	Mex.$123,847.03
	March, 1920.
Percentage of loss by currency depreciation	27.17
Car Miles run	404,622
Passengers Carried	8,783,760
	March, 1919.
Percentage of loss by currency depreciation	26.12
Car Miles run	360,570
Passengers Carried	7,495,228
	3 Months ended 31st March, 1920.
Gross Receipts	$555,978.96
Loss by currency depreciation ...	140,647.07
Effective Receipts	...Mex. $415,331.89
	3 Months ended 31st March, 1919.
Gross Receipts	$463,945.08
Loss by currency depreciation ...	112,030.64
Effective Receipts	...Mex.$351,914.44
	3 months ended March, 1920.
Percentage of loss by currency depreciation	26.63
Car Miles run	1,163,825
Passengers Carried	24,782,507
	3 months ended March, 1919.
Percentage of loss by currency depreciation	25.38
Car Miles run	1,038,425
Passengers Carried	20,977,704

Russians Sieze Cars.—Further light on Trans-Siberian Railway conditions is shed by the former Japanese Consul at Irkutsk, who returned recentiy from Siberia. He says the population of Irkutsk has been increased 30 times compared with pre-war times, the number of people reaching 300,000 and at Omsk, the number of inhabitants, which was between 70 and 80,000 before, now is said to amount to 600,000. Houses being wanting, the majority of people are living in goods and passenger cars. To-day, many locomotives are found in a round house their boilers frozen stiff. Coal is very scarce. Cargo shipped from the mines is found reduced to one-tenth of the original shipment, when the consignment reaches the destination, those living in cars helping themselves to the cargo as it is transported.

Manila Railroad.—Among the first measures passed by the Fifth Philippine Legislature at the First Session on February 25 was one authorizing the Governor-General to buy, on behalf of the Government, sixty thousand six hundred and thirty-five shares of the capital stock of the Manila Railroad Company of the Philippine Islands, of the par value of twelve million one hundred and twenty-seven thousand pesos, to be paid for at the time of the execution of the subscription contract, as follows: The sum of one million pesos in cash and eleven million one hundred and twenty-seven thousand pesos applied to the present indebtedness of the Manila Railroad Company of the Philippine Islands as successor of The Manila Railroad Company. This sum goes to the general funds of the Government of the Philippine Islands for loans to the corporation last named.

To Represent China.—An order issued by the Ministry of Communications instructs Mr. Foley and Mr. Hsueh Hsi to participate in the forthcoming railway traffic conference at Tokio.

Mingshui-Changchiu Light Railway.—Mention was made some time ago that local Chinese in Shantung were discussing the construction of a light railway between Mingshui and Changchiu for the purpose of facilitating coal transportation. We now learn that the work has already been started on the line, hundreds of coolies being employed for the building of the road bed and embankment.—"China Advertiser."

Amoy-Changchow Railway.—An interesting situation has developed with regard to the proposed railway between Amoy and Changchow. Originally it was decided that the thirty million dollar industrial domestic loan should be utilised for the construction of this line, but when the proclamation of the loan was made it contained no reference to the railway. Since then it has been decided by the Ministry of Communications to inaugurate a bureau to carry out the construction of the railway, and it is probable that a loan to cover the expenditure will be floated. One great difficulty in the way of proceeding with the undertaking is the fact that a portion of Changchow is occupied by Southern troops.

Subways for Tokyo.—Tokyo is promised a subway rapid transit service within the next six or seven years, if the plans that have been framed by three promoting companies come to fruition. The Government has granted charters to the Tokyo Railway Company, the Tokyo Rapid Transit Company and the Musashi Electric Company to construct "tubes" in the city. An expert is expected to arrive in Japan shortly to advise and generally supervise the construction. This man, it is said, has had a long experience with the London "tubes." When the scheme of constructing subway lines in Tokyo was first mooted, the Government encouraged the project, but stipulated that the different companies in the new enterprise should combine and make one big undertaking of the scheme. This was not agreed to and for some time the Government withheld the necessary permission, but a few days ago granted the charters applied for.

The Tokyo Railway Company proposes the construction of three lines, 20.6 miles in length. The first of these will be from Meguro to Oshiage through Tsukiji; the second from Igebukuro to Susaki, through Takatanobaba, Iidabashi and Otemachi; while the third will be from Sugamo to Manseibashi. The total cost is estimated at Yen 92,000,000. It is hoped that work will be commenced this year and it is hoped to have all the lines running by 1927. The Tokyo Rapid Transit Company proposes constructing a subway from Shinjuku to Otsuya via Hibiya and Mansebashi. The distance is small being a little over 4 miles, but according to the present system of travelling, where one has to wait for the street car and then transfer twice or thrice, from 40 minutes to one hour is required to do the distance. The company proposes to do the distance in less than 10 minutes.

The Musashi Electric Company promises to construct a line from Meguro to Hibiya traversing the western outskirts of the capital. The route will be five miles in length and is estimated to cost about Yen 20,000,000.

The great saving of time that will result when these schemes reach fruition and the subways are in good working condition may be judged by the claim of the promoters of the subway schemes that the distance between Shinagawa and Asakusa will be done in 13 minutes in a "tube." At present to go from the Ginza to Asakusa, it takes well over an hour. "A great benefit that will result from this scheme," said one of the floaters of the new companies to the "Japan Advertiser," "is that it will greatly relieve the congested state of travelling in Tokyo and the outskirts. At the present rate of over-crowding and deterioration of the rolling stock and tram tracks, the entire transportation system of Tokyo, by street car, will be as good as tied up in three years. The street cars will continue to run even when the 'tubes' are in full working order, but they will be as different from the present cars as we hope to make the 'tubes' different from the narrow crowded boxes that now do service for the travelling public of Tokyo."

That the successful termination of the subway scheme may be the beginning of an "underground" world in Tokyo was another of the hopes entertained by the promoters. "Erection of skyscrapers will not be a successful project. The Japanese do not seem to care for that, and all said and done, it is a question whether tall buildings are ornate. I rather think that they tend to mar the beauty of a city, though they may be impressive. After we have burrowed into the ground and Tokyo is enabled to travel more comfortably and quicker, I hope to see others following in our wake too. It is not such an impossible project to put many of our smaller factories underground. That will relieve the housing situation considerably, and the ugly sights that are to be seen of little workshops dotting the city in irregular confusion everywhere, will, I hope, go 'down below.'"

It is proposed to run the 'tubes' at a uniform speed of about 16 miles per hour. The trains will be available from 5 a.m. until midnight, and the charges will be 2 sen 5 rin per mile. Although the companies that have projected the subway scheme will not combine, it is understood that when the lines are all completed, they will amalgamate into one joint company which will probably be semi-officially run, the Government subsidizing the service partially. At places where subterranean excavation is inadvisable, the track will be elevated.

Horvath Advisor to China.—General Horvath, until recently in control of the Chinese Eastern Railway at Harbin, has been appointed by the Chinese Government as advisor in connection with the affairs of the railway at a salary of $3,000 per month. General Horvath will remain in Peking.

Chinese Eastern Directorship.—Mr. Wang Ching-chuan has been appointed Associate Director to the Russian Resident Director of the Chinese Eastern Railway in succession of General Horvath, and Mr. Yu Jen-feng is to assist Mr. Wang. Many technical experts are also appointed to attend to the various duties of the departments of the line.

The "Yi Shih Pao" says that Mr. Pimenoff, the new Russian Director of the Chinese Eastern Railway has suggested to General Pao Kweiching that the Railway Administration should demand payment for the transportation of Allied and Associated troops, and that the following amounts are owing: American $250,000, Japan $1,690,000, Britain $100,800, Italy $7,000, China $144,793, and enemy countries on account of prisoners of war $360,000.

The Chinese have now organized a Chinese force for policing the Chinese Eastern Railway under the chief command of General Chang Huanhsiang at Harbin (nephew of high inspecting commissioner Chang Tso-lin of Manchuria). The Chinese railway police are armed with rifles manufactured by the government arsenals at Hanyang and Tehchow. The whole line is divided into six sections as far as the Manchuli station each of which is under the control of a sectional chief or Tuan-chang. All the Chinese experts who have been selected from among the employees of the Peking-Hankow and the Peking-Mukden railways have now been given various posts by General Pao.

ROADS

Big Street Programmes in Japan.—Tokyo proposes to spend some Yen 38,000,000 on improving the streets during the next ten years. The "Tarvia" interests of America are preparing to lay experimental sections for test purposes. Kyoto, Kobe, Osaka and other cities will follow suit and the improvements will involve the expenditure of many millions. The new highway to be built between Tokyo and Yokohama will be paved and will be from 60 to 75ft. wide. Osaka, as previously mentioned, is contemplating spending Yen 200,000,000 in improving the city, and a new highway will connect with Kobe. To handle the many paving contracts which are contemplated and already let, a new company has been organized by leading business men of Tokyo and Osaka, says the "Japan Advertiser." The company known as the Nippon Shigai Kensetu Kaisha, has a capital of Y6,000,000 and will have its headquarters in Tokyo. One of the organizations responsible for the proposed improvements, not only in Tokyo but throughout the principal cities of Japan, is the Civic Improvement Association of which Baron Goto is the head. Baron Goto has been in America and given the subject of civic improvement and betterment much study. At the meetings of the organization, lantern slides showing the ideal streets of America and other countries have been displayed, and an intense propaganda has been carried on for civic improvements in Japan.

SHIPPING

"Ukishima Maru" Missing.—The s.s. *Ukishima Maru* (1,249 tons), which was sold to a British firm by the Imperial Steamship Co. of Kobe to be delivered at London, left Moji on February 24. She went to Keelung to ship coal and then proceeded to Singapore, but since then nothing has been heard of her. It is feared that she was wrecked. As she was loaded with sugar at Moji, the loss will amount to a large sum, the ship alone being worth one million yen.

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Storage batteries and dry cells
Bare and insulated wire and cable
Telephones, switchboards, bells and accessories
Meters, instruments, line hardware and tools
X-Ray and medical equipment
Lamps, fans, wiring devices, fixtures and glassware
Domestic appliances for heating, cooking, etc.
Electric commercial and pleasure vehicles

Mechanical Supplies

Machine shop equipment
Mechanical transmission equipment
Pumps, meters, instruments and gauges
Stationary and marine oil engines
Pipe and pipe fittings
Belting, packing and asbestos mechanical goods
Flour, rice and oil mill machinery
Compressors and drilling equipments; blasting materials
Surveying, drafting and assaying instruments and supplies
Scales, vaults, tractors, trucks and road-making materials

Railway Supplies

Locomotives
Freight and Passenger Cars
Bridges and Turntables
Rails, Couplers, Crossings and Switches
Railway Specialties and Stores

Building Supplies

Roofing, glass and hardware
Sherwin-Williams paints and varnishes
Red and white lead
Concrete reinforcing bars and triangle mesh
Plumbing, heating and wiring devices

GENERAL IMPORTERS AND EXPORTERS

Hongkong Shipyard Employes' Strike.—The Chinese employes in the engineering trades have demanded an increase of forty per cent. in their wages. The Hongkong & Whampoa Dock Company, and the Taikoo Docks conceded, as from April 1, an additional 9½ cents per hour, with a consequent addition of 2¼ cents per hour on overtime at pay and halfpay, and 3 cents per hour for overtime at double pay. This concession apparently has not satisfied the fitters and turners in the shipyards, who have not turned up to duty. It is feared that a sympathetic movement will affect other industrial establishments.

Japan's Shipowners Worried.—The improvement in the shipping market of Japan, which was looked for at the beginning of April, has not materialized and the market, if anything, is weaker than ever. Several large ocean-going vessels have been diverted to the near-seas trade because of the failure to obtain cargo for them on the ocean routes.

The extra freight space offered by the U.S. Shipping Board steamers built in Japan continues to be one of the principal causes for the depression in the Pacific trade. This supply of tonnage will continue until the latter part of May. Another reason of the falling off in the market is the unusual activity of the American shipping concerns in their quest for Oriental trade. These companies have entered the far eastern circle on a large scale and, with characteristic American aggressiveness have made a strong bid for the carrying trade between Oriental ports and the Pacific ports of the United States.

During August, September and October of last year there was an unwonted activity on the European market, but recently, owing to labor troubles and the adverse condition of the exchange, cargo for European points has become very scarce. Even the N.Y.K. and the O.S.K. concerns that maintain regular service to European ports, find it difficult to gather sufficient freight to make the service pay.

Spasmodic shipments of wool and wheat from Australia, steel from America and a few other staple products are about the only bright features of the ocean carrying market. Otherwise the outlook is gloomy and there is no immediate prospect of improvement.

Before the end of March fifteen ships totalling 103,000 tons were disengaged. In April there were 31 more vessels without charter engagements and the disposal of these ships is the cause of much speculation and worry in shipping circles.—"Japan Advertiser."

Japan's Floating Exposition.—The International Exhibition Company, floated in Tokio last December to introduce Japan's national industries to all the world and to promote her commercial interests abroad, plans a "floating exhibition" next month. A vessel of 11,900 tons is now in course of construction at the Kawaski dockyard, and on this will be laden handicrafts peculiar to and constructed in Japan. She is to be named the *Kifuken Maru*, or the Ship of Good Fortune, and will cruise in all parts of the world for 10 or 11 months, touching at important trading ports and holding exhibitions at each of the stoppings. The principal exhibits will be raw silk and silk textiles, marine and agriculture products and works of art in lacquered ware and bronze. A cinematograph apparatus will be installed and through the medium of the screen Japanese customs and manners will be introduced. There will be representatives of exhibitors on board, and several medical commissions will also be represented, the latter taking this opportunity to investigate sanitary, industrial and political developments in other parts of the world.

Round the World Line.—The sailing of the *West Casson*, of the Pacific Mail Steamship Company, from New York marked the opening of a round the world services by a United States shipping company. The *West Casson* sailed for Kobe, Yokohama and Calcutta and will return home by way of the Mediterranean and the Atlantic. The Shipping Board is at the present time building four passenger vessels, which when completed will be allocated to the Pacific Mail Steamship Company for its service between San Francisco and Japan.

New Chinese Venture.—A new Chinese shipping company, having as its object the maintenance of a service between China and South America viâ Panama will be shortly established, according to information from the Japanese Consul at Panama.

This shipping company is being promoted by the Chinese merchants in Peru and Chile. The "Chunghua Steamship Company" is the name of the new concern. The promoters have completed all the official procedure necessary for the establishment of the company.

A representative of the new company is now on his way to China viâ America. In this country he will arrange to buy three steamers of from 5,000 to 10,000 tons for his company.

Many Ships; Little Cargo.—The Osaka Shosen Kaisha steamer *Andes Maru*, which recently arrived at Yokohama from Kobe, en route to Europe, had but 1,200 tons of cargo, principally bean-oil, starch and tinned provisions. She will take about 1,000 tons more at Yokohama and get the balance of her cargo at ports in China and India. The Nippon Yusen Kaisha and the Osaka Shosen Kaisha are experiencing much difficulty in securing cargoes for Europe and the offerings are rapidly decreasing, despite the fact that there is a keen demand for foodstuffs in all European countries. These companies are forced to depend upon cargoes from China and India and are finding the maintenance of the European lines unprofitable.

SHIPBUILDING

Motor Boats in China. — According to an American Consular Report, motor boats are gaining in popularity among the Chinese, and the time seems not far distant when they will be in far more general use for business and pleasure. It is reported that at least 50 boats are being constructed in the various yards at Canton, and that there is a demand for motor-boat engines developing from 15 to 35 horsepower. While American engines are popular, manufacturers should take into consideration that the Chinese give great weight to the price, rather than basing their purchases solely on quality, especially as European manufacturers undoubtedly will take advantage of this fact in their efforts to capture this growing market.

BUILDINGS

Tsining Settlement.—The establishment of a foreign settlement at Tsining, which was strongly advocated by Brigadier-General Chin Yun-é, younger brother of Premier Chin, and Mr. Pan Fu, Vice-Minister of Finance, will be carried cut in accordance with a plan drawn up by a French engineer. The area allotted will embrace a piece of land 20 by 10 *li* and the cost of construction will reach $800,000.

Japan's Housing Problem.—The scheme of the municipal authorities of Yokohama to provide additional houses for those who are in straightened circumstances has proved such a success that preparations are already under way to construct 2,400 similar dwellings at a cost of Y.600,000. This amount has been subscribed by wealthy business men and other residents of the city.

The first group of city-built homes consisting of 74 dwellings, a public bath house and grocery store, erected at Minamiota, a suburb of Yokohama, has already been completed and every cottage occupied. Minamiota was selected, because of sanitary and climatic advantages. A large play-ground for children is also situated in the new settlement. The 74 dwellings cost approximately Y.100,000, including the cost of the land. Each cottage has three rooms and the rent charged is Y.7.50 to Y.8, according to the location.

The sites for the new houses have been selected at Nakamura-cho and at Kanagawa, and construction work will begin very shortly. All will be completed within the year. There will be 200 houses at each place in addition to a bath house, grocery store, barber shop and an institution for the care of children while their parents are at work. The new houses which are to be erected at Nakamura-cho and Kanagawa are to be somewhat larger than those at Minamiota and a higher rent will be charged, ranging from Tls. 8.50 to Y.15 per month. There are applicants now for more houses than will be built during the year.

INDUSTRIAL

Cotton Mill Expands.—The Fuji Spinning Company has decided to double the company's capital to Y.38,000,000 by issuing 400,000 new shares to the company's original shareholders and 40,000 to the company's employes and officials. The matter will be submitted to a meeting of the shareholders who will be allowed one new share for every one of old shares and may use the company's accumulated reserve wherewith to pay for the new shares.

Insurance in Japan.—The Life Assurance Companies' Association reports that life insurance offices in Japan issued 105,465 new policies during February, their total value being Y.102,713,615. At the end of the month the net amount of the valid policies issued was 3,328,339 covering Y.2,222,129,867. The receipt of premiums by life assurance offices during the month was Y.19,298,223.

Needles and Nails His Goal.—Lack of wire drawing machinery and a cheap source of material for drawing once caused a needle factory planned by Chang Chi-tung at Hankow to close down almost before it started. The machinery is still gathering rust, yet another try at this industry is contemplated, says the "China Advertiser," which states that a certain native of Kiangsi is contemplating establishing a factory to manufacture nails and needles at Shanghai. Mr. Li, the promotor, is said to be a graduate of a Japanese industrial school. He succeeded in interesting a number of Chinese capitalists in the scheme and in inducing them to finance him in the work of turning out these two articles, which are entirely supplied by foreign countries. Negotiations are proceeding for the purchase of suitable land. The scheme is by no means a novel one, however, as it was once taken up by the late Viceroy Chang Chih-tung, but had to be dropped owing to the lack of the necessary capital. [Not capital but raw materials.—Ed.]

WELL established and widely connected banking correspondents in all the market centers of the Far East provide for Irving customers reliable and responsive sources of information and service facilities for carrying out banking and commercial operations in every country of the Orient.

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To Develop Railway Zone.—Mr. Yeh Kung-chao, who was recently appointed High Industrial Commissioner, soon will start for Harbin, accompanied by his staff, to investigate the sugar, oil and other industries along the Chinese Eastern Railway with a view to the encouragement of trade between China and Russia. Mr. Yeh considers that the development of native industries and products in Manchuria has an important bearing uopn commercial relations between China and Russia.

Shensi Spinning Mill.—The Chin-Hua Spinning Mill to be established under the promotion of Tuchun Yen of Shensi, capitalized at one and a half million dollars at Yutzu, Shansi, is now organized and subscriptions for shares are being invited. In this connection it may be interesting to mention that the Shansi authorities purchased cotton seed from America and Korea to the extent of 55 tons. When the shipment arrives, the seeds will be distributed among cotton planters, so that the crop can be improved.

To Amalgamate Silk Filatures.—A project for the amalgamation and systematization of all silk filatures owned and managed by individual reelers in Aichi prefecture, Japan, is being made by people interested in the silk industry in Nagoya and other districts in that prefecture. According to their announcement the project consists in organizing a joint stock company called the Chu Seishi Kaisha or Central Silk Filature Company, capitalized at Tls. 20,000,000. The company will take over 31 silk filatures in the prefecture either paying for them in cash or in the company's shares. In the investment market, according to the project of the promoters, 20,000 of the total number of 400,000 shares which represent the company's capital will be sold at premium.

To Mill Yangtze's Wheat.—The Manchurian Flour Milling Company intends erecting another mill at Shanghai in view of the plentiful supply of wheat along the river Yangtze. This new project is, however, not to be managed by the company itself, but will be placed in the hands of a new joint stock company capitalized at Y.3,000,000, called the Shanghai Flour Mill Company. The Manchurian Flour Milling Company will own the best part of the shares in the new company and sell only 5,000 in the market toward the close of this month.

New Cotton Mill for Tientsin.—The Dai Nippon Spinning Company has decided to erect another cotton mill in China following the completion of the mills the company is now building at Tsingtao and Shanghai. The new additional mill will be built at Tientsin, and will employ from 20,000 to 30,000 spindles.

Flour Millers New Plan.—The Toa or Oriental Flour Manufacturing Company has decided to increase the company's capital by Y.2,750,000 in the middle of July this year. The plan is to float a new company capitalised at Y.2,750,000 and later on amalgamate it with the old company.

Investigating Hide Trade.—Liang Shih-yi has been made chairman of a commission charged with making investigations regarding hides and furs and wool in order that the trade in these commodities may be improved. At the same time Chiang Tien-to, vice-minister of Agriculture and Commerce, has been appointed to preside over a commission to investigate the trade in cereals and ascertain how it also can be improved.

Shanghai Leather Factory in Trouble.—The Lung-Hua Leather Factory, which was bought out by Japanese, is in trouble, states the "China Advertiser," a Japanese weekly of Tientsin. It is said that the factory is indebted to the War Office to the extent of some $100,000. According to a native paper, during the 1st Year of the Republic the Military Department gave an order to the factory for 100,000 pairs of military shoes, the factory receiving the price in full in advance. But when 2,800 pairs were delivered, the order was cancelled the Military Department finding no further use for the shoes, and the factory was obliged to dispose of the remnant to other people at a considerable loss. The factory now pleads to the Department for an extension of time for payment of the debt.

AVIATION

Attempted Flight to Tientsin.—On Friday, April 23, Captain Mackenzie together with Mr. Wei, of the Chinese Aviation Department, attempted to fly on an "Avro" machine from Peking to Tientsin and were forced to land about 30 miles from Tientsin on account of engine troubles. In 1913 the first successful air trip from Peking to Tientsin was accomplished by a French aviator on a Caudron biplane, said flight being performed in 1 hour 18 minutes.

Large Shipment of Aeroplanes for S. China.—Only the other day there arrived in Hongkong the largest shipment of aircraft ever exported from the United States. The shipment, valued at half a million dollars gold, was consigned to Mr. C. E. W. Ricou of Hongkong and Macao. It was unloaded from the decks of the s.s. *Dacre Castle* at the Kowloon wharves and thence was transhipped by lighters to Macao to form the nucleus of a commercial aviation service to link by the swiftest, surest, safest, and most modern method the cities of Macao, Hongkong, Canton and Shanghai. Eventually it is the intention to include Manila, Haiphong and Saigon in the itineraiy as well as some of the intermediate China coast ports *en route* to Shanghai. The unloading of the *Dacre Castle* cargo was itself a spectacle, the hugh cases, some 144 in number, containing :—Five Curtiss H-16 flying boats; two Curtiss HS-2 flying boats with wireless equipment; three aeromarine 39-B pontoon airplanes; one Boeing seaplane; eleven flying machines in all—and accompanying them were hanger and motor shop machinery and tools, track layer type tractor for pulling aircraft on trucks out of the water and about the hanger yard, handling trucks for all Curtiss machines, enough aerofoils to completely refit the Curtiss and aeromarine, enormous quantities of wire, spark plugs, dope, glue fabrics, instruments, etc., one hundred propellers and ten extra motors complete.

The H-16 and the HS2L types of flying boats are important seaplanes developed for the American Navy during the great war. The former has a wing span of 96-ft. and is powered by two Liberty motors : the latter is 74-ft. from tip to tip and employs a single Liberty 400 h.p. engine.

The capacity of these seaplanes for commercial carrying will be considerable. The H-16 has a carrying capacity, exclusive of fuel for 675 miles at economical speed. of ten persons. The HS2L, with fuel for over 500 miles, can carry a load equal to five persons. Merchandise can, of course, be substituted for passengers.

Shanghai Chengtu Air Line.—Plans are now under way to establish a passenger and mail air service between Shanghai and Chengtu, Szechuan merchants and an American returned aeronautical engineer. Although difficulties are predicted, the promoters are pushing the scheme. It is understood that $500,000 has been raised. Eight machines will be purchased from America.

The stations will be Shanghai, Hankow, Ichang, Chungking and Chengtu. The pilots and engineers, according to the plans of the company, will be Chinese. The promoters will raise all the necessary funds and no outside or foreign capital will be solicited.

Australian Defence Urged.— Sir Arthur Brown, the pioneer of the trans-Atlantic flight, urges the necessity of developing aviation in Australia as a commercial enterprise. He says it would contribute to the wealth and welfare of the Empire and back up the defence force. "You must have a fighting force. I will not mention the nation with whom you all expect to have war, he said recently, but I know you have one in mind. I think such a struggle may be closer than you imagine. Therefore you see the importance of developing and perfecting an air line in the scheme of defence."

LABOR

Japan's Labor Worries.—At the first session of the Industrial Affairs Investigation Committee, Premier Hara said that the war created many industrial problems for Japan, which are still awaiting solution. Japan, he said, is still in her own environment, and, conditions in Japan being different from those of Western Europe, the solution of Japan's industrial problems cannot be carried out along the lines followed by Western nations. The solution of those problems will necessitate alterations in laws and institutions, and a committee has been appointed to study the new developments in the industrial situation and to advise the Government as to the best course to pursue.

The committee got to work as soon as the Premier had finished speaking, and the first bill referred to it by the Government—the Trades Union Law—was, after a brief study, referred to a special committee nominated by the chairman.

HARBORS

Delay New Ch'ing Ho Port.—According to a "China Press" Correspondent at Lanhsien, Chihli, the project for the opening up of an all year round port at the mouth of the Ch'ing Ho is being held up in the Chihli legislature by the Japanese, no doubt because they have no share in the proposed undertaking. It was reported that a capital of $40,000,000 was being subscribed for the necessary work at the mouth of the river and the building of the railway line that would connect the port with the Peking-Mukden Railway at Changli.

Harbor Construction at Lienshanwan.—Mr. Chow Chao-hsiang. Superintendent of the Harbor Construction Work at Hulutao, is now at Mukden, having returned from his visit to Dairen, and conferring with General Chang Tso-lin concerning the ways and means of carrying the scheme into effect. It is said that Mr. Chow proposed to Gen. Chang to detail engineers to Dairen, Yingkow and Chinwangtao to study conditions at those ports before work is taken up at Hulutao. As the proposal was approved by Gen. Chang, competent engineers will be commissioned before long to inspect the three ports.

ELECTRICAL ENTERPRISES

Swatow Electric Plants. — There are four electric light plants in the Swatow district, the one at Chaochowfu having commenced operation in the latter part of the year. The Swatow Kaiming Electric Light Co. had another profitable year and declared its usual dividend of 8 per cent. in addition to adding a good sum to its surplus. During the year the number of lights supplied rose from 15,000 to 19,200, due chiefly to installations in gambling houses. Four of the five dyamos are in use every night. The Hing-ning and Kaying plants have a capacity of between 2,000 and 3,000 lamps, while that of the Chaochowfu plant is five thousand 20-watt lamps.

A number of American light plants have been sold in this district during the year, most of which are being operated on a commercial basis at a charge of 64 to 96 cents per lamp. Their small cost especially appeals to the Chinese, with whom electric lighting has become very popular, and during the next few years considerable development along this line should occur.—U.S. Consular Report.

Installation at Lipa, P.I.—A new provincial electric company, "Electra Lipena, Incorporated," has recently been incorporated under the laws of the Philippine Islands, and will start the installation and operation of an electric light, heat and power plant in the city of Lipa, the largest city in the province of Batangas. The company is incorporated with an authorized capital of P.250,000, of which P.125,000 is subscribed and P.100,000 paid. Lipa is a first class municipality of over 50,000 inhabitants, and is the home of many distinguished and progressive Filipinos. This move on the part of the Lipa residents is expected to father a general formation of power companies in the municipalities not already equipped.

TELEPHONES AND TELEGRAPHS

Peking-Nanking-Wuhu Long Distance Line.—The Chinese Ministry of Communications is convinced of the absolute necessity of establishing a long distance telephone service between Peking, Nanking and Wuhu. Such a service has a direct bearing upon the commercial developments of the country in general and the military facilities of the Northern Province in particular, says the "Peking Leader." The prospective scheme was discussed some time ago, but on account of the lack of appropriate funds to operate such a huge undertaking, the question, however needful it may have been, had to be held over for future consideration. The Ministry of Communications considers it advisable to discuss the question again. Mr. Wang, a member of the Ministry, has been deputed to consult with the Telephone Authorities in Nanking, which city the Ministry has the intention of transforming into a switching station, linking up the two lines running to Wuhu in one direction and to Peking in the other. The necessary machinery and plants will be obtained from the States. Instructions have also been issued by the Ministry to the Departments of Stores Transportation that proper quarters should without delay be erected in order to receive the various plant and machinery when it arrives. By this means, the Government desires to centralise its efforts on Nanking, which will on the completion of the project connect up the three provinces of Kiangsu, Chekiang and Anhui.

Two Sen Phone Rate.—Two sen or one U.S. cent a call is the astounding announcement from Japan and even such a ridiculously low charge (compared with U.S. telephone tolls) is expected to return a huge income. Therefore, a system of calculating telephone charges according to the number of calls made will be put into effect for the six largest cities of Japan—Tokyo, Osaka, Kyoto, Kobe, Yokohama and Nagoya by the Department of Communications next month. Officials of the department say this system, while augmenting the income from telephone service, will not mean additional expense for the ordinary telephone user. The ordinary rate will be 2 sen a call. This will be in addition to annual charges for each phone, amounting to Yen 40 for Tokyo, Yen 35 for Osaka and Yen 30 for Yokohama, Nagoya, Kyoto and Kobe. The present annual charge for Tokyo is Yen 66.

There are 5,500 telephone subscribers in Tokyo and official figures show that these average 20 calls a day.

Newspapers will be given a special rate of 1 sen a call. Tally of the number of calls made over each phone is to be kept by an automatic calculator to be installed in the exchanges. The number of automatic phones in Tokyo will be increased shortly, it is annnounced. There will be no increase in charges, but the limit for a conversation will be reduced from five minutes to three. There are now 250 of these telephones in Tokyo.

WIRELESS

Radio to Lessen Congestion.—The Japanese Dept. of Communications has informed the "Japan Advertiser," that since the restoration of the Pacific cable to working order, the congestion in the cable service has decreased somewhat. The position, however, is far from satisfactory. Radios are going to be utilised for relieving cable congestion, and the receiving station that is being erected at Tomioka-mura, Fukushima Prefecture, which is almost complete, will, according to the Department of Communications, greatly relieve the existing congestion of cables between America and Japan. It is not yet definitely known when the new office will be opened to public use, but the probabilities are that before the month is over messages will be received by the new station.

Incidentally this is the first wireless station to come under the direct control of the Department of Communications. In the past radio messages to America for business purposes had to be sent through the naval wireless station at Funabashi. The Tomioka-mura station will be able to receive in the neighborhood of 8,000 words a day. A station to despatch wireless messages is being built at Harano-machi, about 25 miles from the Tomioka-mura receiving station, and will be ready some time in the summer. When both the new stations are in full working order, a great deal of the present inconvenience will automatically disappear.

PUBLIC UTILITIES

Manila's Water Supply.—Almost the first act of the Americans when they began to administer the Philippines was the creation of sewers and a water supply. Now the eight million peso plant is too small and the Metropolitan Water District board of Manila, at a meeting held at the office of Mayor Fernandez, chairman of the board, has chosen the Angat river, Bulacan, as the most suitable place for the construction of a new dam and headworks for the proposed waterworks designed to supply Manila. The board appropriated P.178,000 for the survey of the river, and will visit the place for inspection. The whole project will involve the expenditure of several million pesos.

MINING

Anglo-Chinese Coal Mine.—The coal mine discovered at Wangtsun along the Shantung line by Tung-I Kungssu of Tsinanfu was to be operated by Chinese. It is now reported, says the "China Advertiser," that satisfactory arrangements having been made between the firm and Mr. Stetton (?), British engineer, who was surveying the mine for the Chinese company, the enterprise will be carried out jointly. The necessary mining machinery will be purchased from Messrs. Andersen, Meyer & Co.

Japanese-Canadian Co.—Messrs. Shintaro Ohashi, Tsukei Sugawara and other businessmen are considering starting a new company styled the Canadian Industrial Development Company capitalised at Y.5,000,000 to exploit pyrite veins at Queen Charlotte Island near Vancouver.

Tunglin Copper Mines.—Some ten years ago the copper mines at Tunglin were purchased by foreigners, and that after a lot of trouble they were bought back by the natives of Anhui, but since then nothing has been done to develop the mining industry in the district. Recently some native merchants signed a contract with certain British capitalists, says the "Peking Daily News," for the operation of these mines. A Sino-British Corporation called the Chung Ing Kung Sze has been organized and an application has been sent to the Tuchun of the province for sanction. As it has been discovered that the concern has been fully financed by Japanese, who have already obtained absolute control of these mines, the Tuchun has ordered the applicants to address their application to the Ministry of Agriculture and Commerce, as he does not like to take any responsibility in the matter.

Fenghuangshan Iron Mine.—Gen. Li Shun has been advised by the Ministry of War in Peking to the effect that owing to the urgent demand for raw materials for military purposes, the Government is going to work the famous Fenghuangshan iron mine of Nanking and that for preventing complications with foreign Powers, the mine will be developed with Chinese capital and control without any foreign assistance. In view of the existing financial stringency, the native gentry do not believe that there is any foreign co-operation in the enterprise so that the leaders are going to convene a meeting to discuss this shortly.

It will be strictly a provincial property in the same way as is the famous Shuikoushan tin and antimony mine of Hunan, that is to say the mine shall belong to the province of Kiangsu and no company either foreign or native, can work it without the previous approval of the members of the provincial assembly at Nanking. "This will surely lead to serious dispute with the ministry of war officials who are endeavoring their best to nationalize all those iron mines which have not been given away to foreigners, for military uses, says the "Peking and Tientsin Times."

The mining of coal in the northern part of the Swatow district perforce progressed on account of high prices and inadequate supplies of the imported article. Mining was carried on by native methods and was chiefly confined to surface workings. The product is a very hard dust coal. It is used in briquet form in some native industries and mixed with rice husk in others.

CONSTRUCTION

Catholic Mission Builds Hospital.—Several hundred laborers have been at work since the first of the year on the new hospital compound belonging to the Roman Catholic Mission outside

Foo Chow Men, Nanchang. A modern institution is going up at a cost of $150,000 plus an endowment of $300,000 on the land which was given as an indemnity following the massacre of several Catholic priests a dozen years ago. The work is in charge of Father Paul Monteil who has recently returned from five years service in France. In addition to the general hospital building there will be isolation wards, and nurses' and doctors' homes. Equipment will be shipped directly from Paris and will be the most modern obtainable. It is expected that the hospital will be ready for occupancy by January of next year.

Cubist Hankow did not Materialize.—Hankow native city, which the Bureau of Reconstruction undertook to convert into "the finest and most modern city in the new republic," the "Central China Post" says: "Their first effort was to issue a map of the New Hankow. The draughtsman had taken a sheet of paper and a ruler. From top to bottom of his plan he drew a number of equidistant perpendicular lines, then an equal number of horizontal lines, making it look like a chess board, and finished off by drawing similar lines diagonally from corner to corner making it into a gridiron. He further drew several pictures of the new houses which were to be built in the new town and put them in the window: the Bureau gave an order for three steam road rollers to be supplied, and that was all it ever did."

FINANCIAL

57 Banks in Shanghai.—Trade depends upon finance for its vitality, but it is to the banks that we look for the efficient handling of finance, says the "North-China Daily News." Shanghai, being the central emporium of commerce in this country, holds a position that may financially be likened to that held by New York in America, though not of the same magnitude, of course. Therefore, the banking business here has developed to a remarkable extent, in fact, it has enjoyed unprecedented prosperity for several years past, until now Shanghai stands easily at the head of all the towns and ports in this respect.

At first, foreigners were predominant among those doing banking business, but latterly Chinese merchants have been attracted to embrace the modern system of working a bank. The majority of the latter have, however, come to grief, owing more or less to incompetency and want of experience. Only in very recent years have modern banks promoted and operated by Chinese gradually been enabled to hold their ground.

At present, there are 18 foreign banks, 18 Chinese banks, four Chinese-foreign cooperated banks, seven newly-opened and 10 in course of promotion, or 57 in ail. All Chinese banks run on the old, orthodox lines handed down from ancient times, are not included in the above category.

The Wine and Tobacco Loan.—The "Peking Leader" states that Mr. Lamont is refusing to reconsider the Wine and Tobacco Loan on account of the following three reasons: (1) Wine and tobacco are not indispensable to the people and are annually imported into China on a large scale. Therefore they could not be considered an adequate security especially when compared with the salt revenue and customs duties. (2) His aim being to investigate the general financial situation in China for the purpose of establishing the amount of financial aid to be extended by the Consortium, he could not be favorable to small loans. (3) There prevails a strong public opposition to the Wine and Tobacco Loan which places obstacles in the way of putting it into shape.

Loan to Pay Off Deficit.—The Chinese press reports that the Ministry of Communications proposes that a loan should be secured from the Consortium of $20,000,000 to pay off the deficit of the Chinese Eastern Railway, and also to effect the necessary improvements, offering the railway as security.

Chinese Banks to Pay Workmen.—The Harbin local agencies of the Bank of China and the Bank of Communications have been instructed by the Peking government to co-operate with the administration of the Chinese Eastern Railway in connection with the payment of the workmen and agents, Russian as well as Chinese and it is reported that China agrees to pay the sum of seven hundred thousand dollars through these two banks every month. The only question unsettled is that the Chiness merchants at Fuchiatien and other cities along the line still refuse to accept torn Russian bank-notes issued by defunct Russian government.

Hupeh Assembly *v.* Han-Yeh-Ping.—The members of the Hupeh provincial assembly were called into a special session for the discussion of financial questions concerning the famous Han-yeh-ping corporation *vis-a-vis* the Hupeh government. It appears, says the Asiatic News Agency, that in accordance with the stipulations of the Sino-Japanese treaty of 1915, this corporation will probably be reorganized, that is to say Japanese influence will be actually introduced in the administration so that more Japanese money can be utilized for the development of its concessions in Tayeh and Pinghsiang and owing to certain disputes, the people of this country desire to withdraw those shares which were contributed to the corporation by the provincial government of Hupeh when the late Sheng Hsuan-huai was its director-general for about twenty years.

Further, the people of Hupeh maintain that as the iron mines of this corporation are situated within the territory of this province, the shareholders, either government or private, will not be permitted to admit foreign control without the previous sanction of their representatives that is to say the provincial assembly.

Chartered Bank Dividend.—Reuter is informed that at the approaching annual general meeting of shareholders of the Chartered Bank of India, Australia and China the Directors will recommend that a dividend be declared for the past half year at the rate of 14 per cent. per annum and a bonus of £1 5s. per share free of income tax (making 20 per cent. for the year free of income tax), that £100,000 be added to the reserve fund (which will then stand at $3,000,000) that £25,000 be added to officers' superannuation fund, that £75,000 be written off premises account, and that £172,830 36s. 10d. be carried forward.

Nikko Security Co.—A new business organization, capitalized at Yen 10,000,000, to be called the Nikko Security Company, will shortly make its appearance in the Japanese business world. The Industrial Bank of Japan will give it the necessary financial backing, and the new Company will handle ordinary trust business.

One-half of the capital will be supplied by the Industrial Bank of Japan. The remaining Yen 5,000,000 will be contributed by leading financiers. None of the new Company's shares will be sold in the open market. The first instalment of the stock capital will have to be completed by April, and the Nikko Security Company will begin operations in May. Among the business that it will be interested in is the acceptance and sale of new issues, making of loans on negotiable security documents, acceptance of bills, issuing of letters of credit and the investment of capital in industrial concerns.

MISCELLANEOUS

Japanese-Soviet Pact.—There is a report in Harbin that Japan has signed an agreement with the Russian Soviet Government at Moscow. In return for the withdrawal of the Japanese troops from Siberia and the revival of Russo-Japanese diplomatic relations, the Soviet Government agrees to concede all Russian mining, railway and forestry concessions in Manchuria and Mongolia, either developed or undeveloped and that Japan is going to survey and build the Ping-Hei line, that is from Harbin to Tsitsihar, as a branch of the Chinese eastern railway, shortly. The conference between General Pao and General Horvath concerning the administration of the Chinese eastern railway continues smoothly.

Mukden's American Association.—Announcement has been made that the newly organized American Association of Manchuria, whose headquarters are in Manchuria, will act in the capacity of an American Chamber of Commerce until a separate body is formed. The new association was organized by American residents in Manchuria at the American Consulate on December 17 last. Its object, stated in Article 2 of its constitution, will be "to uphold American ideals and to foster and safeguard the commercial and other interests of the citizens of the United States in Manchuria and elsewhere in China." The new body also will gather and distribute information of value to its members and seek to better relations between Americans, Chinese and other nationals in Manchuria. It intends to collect and administer a local American relief fund and co-operate with other American associations for the purposes of relief work of various kinds. Mr. J. E. Brown is secretary and treasurer.

Philippine Tobacco Products.—That the high reputation established by Philippine tobacco and products manufactured therefrom in the United States market has now re-established itself, after the exportation of musty cigars temporarily impaired this reputation, is shown by the fact that the exportation of cigars, cigarettes, leaf and partially manufactured tobacco for the first quarter of this year is considerably greater than the exportation for the same period in any of the three previous years.

The Philippine cigar manufacturers are confident that, with the resumption of normal, pre-war shipping schedules on all the big ocean routes, a big boom in the Philippine tobacco industry is inevitable. It is predicted that if the increase for the next two years keeps pace with that of the last three months, the supply of available raw material will not be sufficient to feed the factories fast enough to cover the demand on the American and European markets.

Following is a statement issued by the collector of internal revenue regarding the exportation of Philippine tobacco and its manufactures for the first quarter this year and the same period in previous years:—

CIGARS.

Quarter		1917	1918	1919	1920
First.	no.	44,123,687	58,666,616	59,399,724	72,846,140

CIGARETTES.

,,	,,	1,403,500	1,662,500	930,000	1,204,250

LEAF TOBACCO.

,,	kilos.	231,430	94,425	—	28,330

PARTIALLY MANUFACTURED TOBACCO.

First,	kilos.	402,331	559,459	32,380	184,230